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J. J. CASSIDY, M.D., EDITOR.

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A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF MEDICINE AND SURGERY

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Original Contributions.

REPORT OF THE LABORATORY OF THE PROVINCIAL BOARD OF HEALTH.*

BY JOHN J. MACKENZIE, B.A., M.B.,
Bacteriologist to the Ontario Provincial Board of Health.

MR. CHAIRMAN AND GENTLEMEN,—The work of the laboratory since the last meeting has shown considerable increase along certain lines. As pointed out in the last report, the use of the history cards with the specimens examined, has led to the collection of a quantity of interesting data, which, in time, may be incorporated in the form of special reports.

Not all of the correspondents comply with the request of the Board in regard to filling out the cards, and where this refusal is persistent, the only remedy is to refuse to examine the specimens. Some correspondents object to sending the histories upon open post-cards, as they say, that in a small place, such a history becomes public property. I have suggested to such the advisability of enclosing the card in an envelope and sealing it; this has been done in many instances.

A number of physicians are careless in answering the questions asked upon the cards; especially is this the case in regard to history of infection in tuberculosis and the date of the disappearance of the membrane in diphtheria. On account of this carelessness the diphtheria cards are of very little value as yet. I note from examining the diphtheria cards that the majority of physi-

* This paper was read at the second quarterly meeting of the Provincial Board of Health of Ontario.

cians are willing to make use of the laboratory for the purposes of diagnosis, but are not willing to use it for the sake of release from quarantine.

The sources of the material are as follows: Suspected exudates have been received from 45 municipalities (in nine municipalities all the physicians send through the medical health officer); suspected tuberculous sputum, from 94 municipalities and 115 physicians; typhoid blood, 11 municipalities and 18 physicians. The work in the examination of sputum has shown a very marked increase, which seems to be continuing. By months the specimens of sputum have been as follows: January, 41; February, 51; March, 59; April, 67; May, 74. This makes for the first five months of the year almost as many specimens as during the whole of last year.

For the first four months the total specimens were as follows: Sputum, 218 (with these I received 138 history cards); diphtheria, 202 specimens (for which I received 123 history cards); typhoid blood, 26 samples (for which I received 14 history cards); water samples — bacteriological, 13; chemical, 16; miscellaneous examinations, 51; total for first four months, 526.

The largest number of history cards were received in the case of suspected tuberculous sputum, namely, 138. Although this number is not very large I have attempted to extract what information I can from these cards to submit to you. Some of the results are interesting, but until we possess a much larger number of cases, must be taken with reserve. Of the 138 cases in which cards were sent in 57 were positive, 81 negative. Upon the history card the age of patient is asked. The results according to age are as follows: Under 10 years: 2 specimens (1 positive, 1 negative), percentage, positive, 50; 10 years to 20 years: 22 specimens (8 positive, 14 negative), percentage, positive, 36.3; 20 years to 30 years: 46 specimens (23 positive, 23 negative), percentage, positive, 50; 30 years to 40 years: 33 specimens (11 positive, 22 negative), percentage positive, 33.3; 40 years to 50 years: 21 specimens (12 positive, 9 negative), percentage, positive, 57.1; over 50 years: 14 specimens (2 positive, 12 negative), percentage, positive, 14.2. Another question on the history card asks for the duration of symptoms before the specimen was sent. From the answers the following figures have been obtained: Symptoms existing 1 month and under: 18 specimens (positive 3, negative 15), percentage, positive, 16.6; 1 to 2 months: 26 specimens (positive 9, negative 17), percentage, positive, 34.6; 2 to 3 months: 14 specimens (positive 7, negative 7), percentage, positive, 50.0; 3 to 6 months: 27 specimens (positive 15, negative 12), percentage, positive, 55.5; 6 to 12 months: 28 specimens (positive 13, negative 15), percentage, positive, 46.4; 1 to 2 years: 8 specimens (positive 5, negative 3), percentage, positive, 62.5; over 2 years: 15 specimens (positive 4, negative 11), percentage, positive, 26.6. I give the figures for what they are worth, and simply would point to the

cases where positive diagnosis was made within two months of the onset of the disease. The next question asks for the present symptoms. This has been answered with more or less fulness by the different men. With a large number of cards, say 1,000, we may hope to use this answer in studying especially those cases in which a positive diagnosis is made within two or three months of the onset of the disease, and in studying those negative cases in which the disease has existed for more than two years. The last question upon the card is as to history of infection. At first in looking over the cards I was somewhat disappointed with the number which gave positive history of infection, but when tabulated a rather interesting result is obtained. It remains to be seen if subsequent results bear out the figures here given. Of those specimens in which the bacilli were found 34.4 per cent. gave a positive history of exposure to infection. Of those specimens in which the bacilli were not found only 7.4 per cent. gave a positive history of exposure to infection.

I have been unable to obtain any data of interest from the diphtheria cards, partly on account of the small number and partly on account of carelessness in filling out the cards. Of the 123 diphtheria cards 85 were for diagnosis, 38 for release from quarantine. Of the diagnosis cards 33.3 per cent. were positive.

An interesting feature of the laboratory work of the first four months of the year was the receipt of four specimens from cases of suspected cerebro-spinal meningitis. The epidemic form of this disease is now known to be due to a specific organism called diplococcus intracellularis meningitidis. It differs from the diplococcus of pneumonia, which sometimes causes meningitis, in its staining, cultural and pathogenic characters, so that in material from the meninges it is usually possible without much difficulty to differentiate the two forms. The chief differences are as follows: By Gram's stain diplococcus intracellularis does not stain, diplococcus pneumoniæ stains. It is more difficult to cultivate than the pneumococcus and dies out more rapidly in cultures. Whilst the pneumococcus is very pathogenic for mice and rabbits, the diplococcus intracellularis is only slightly so.

The rapid death of the organism makes it difficult usually to get a culture, especially if the cerebro-spinal fluid has been allowed to stand any length of time after removal from the body. Even in fresh material in which the microscope shows many organisms it is necessary to make several cultures as only a percentage of them show any growth. It is consequently hardly possible to hope for a positive diagnosis by culture with material sent to the laboratory from a distance, and the diagnosis would have to depend largely upon the negative cultural results and the staining peculiarities.

With the appearance of epidemics in various parts of this continent within the past year (notably in Boston, Baltimore and Philadelphia), it was of special interest to try and decide whether

the Ontario cases were due to the organism of the epidemic form or to the diplococcus of pneumonia.

The first specimen was received March 20th. It was from a fatal case with an illness of about 48 hours. The specimen consisted of about 25 c.c. of bloody cerebro-spinal fluid, with a white sediment and containing white flocculi. On centrifuging it separated into a layer of reddish sediment with a clear blood-stained fluid above. A number of cultures were made from the material on different media, but they all remained sterile. Stained preparation showed that the sediment consisted of red blood corpuscles, polynuclear leucocytes and large mono-nuclear leucocytes. Certain of the polynuclear leucocytes contained diplococci somewhat flattened 1.0μ x 0.75μ in pairs. These organisms did not take the Gram stain. Two grey mice were inoculated, one subcutaneously with $\frac{1}{2}$ c.c. of the fluid, the other intraperitoneally with $\frac{1}{4}$ c.c. of the same material. Both animals lived, the second showing slight illness for a day.

We had then in this case a purulent cerebro-spinal fluid containing intracellular diplococci, which did not take the Gram stain and which apparently were dead when received.

The presumption was that this case of cerebro-spinal meningitis was the epidemic form. Within a month three other specimens were received from the same county; but in no case could a positive diagnosis be made, although in one the same intracellular diplococci were found. In another only serum tubes, inoculated by the physician who made the *post-mortem*, were sent, and as they remained sterile nothing could be made out. In the other the specimen was badly packed and was broken before it reached the laboratory.

In recent epidemics of this disease the method of lumbar puncture has been extensively used as a means of diagnosis, and in some cases even as a therapeutic measure.

The puncture is made between the third and fourth lumbar vertebræ about one centimetre from the middle line, a large sterilized hypodermic needle being used detached from the syringe; the needle is pushed slowly upwards and inwards, the entrance of the point into the spinal canal being at once shown by the flow of cerebro-spinal fluid from the open end, sometimes under considerable pressure. Some of this is caught in a sterile tube and a number of cultures at once made.

In fatal cases of cerebro-spinal meningitis this should be done if a *post-mortem* is not permitted, as a positive diagnosis can only be made by bacteriological examination.

It is important that physicians throughout the Province should recognize the importance of making as certain as possible the diagnosis in cases of this disease, since, if there is any danger of an epidemic, such as occurred in Boston, precautions should be taken.

During the past few months I have been making a series of investigations into the character of a bacillus found in grass, which resembles the tubercle bacillus.

It was first described by Moeller as occurring in this situation, but apparently its first recognition was by Rabinowitch in butter. Its occurrence in butter has undoubtedly given rise to error, as it is apt to be reported as the bacillus of tuberculosis.

Its growth in culture media is not unlike that of the bacillus of tuberculosis except that it is much more luxuriant and rapid. It stains with ordinary tubercle stain, and in cover glass preparations looks so like the tubercle bacillus as to give rise to doubt in one not well acquainted with the true form. Inoculated in large doses in guinea-pigs it gives rise to a disease of the nature of a pseudo-tuberculosis, small tubercles consisting of granulation tissue being found in the peritoneal cavity and liver. In smaller doses it gives rise to a slight indisposition and loss of weight with infiltration and tubercle formation at the point of inoculation and subsequent recovery.

It has not been described as producing a natural infection of cattle.

I found this organism present in several specimens of hay, and from one I succeeded in isolating it in pure culture. The resulting cultures showed the form to be identical with Rabinowitch's butter bacillus, and animal experiments showed it to have a very slight degree of virulence.

I was able to show that its peculiar staining characters are due, as in the bacillus of tuberculosis, to a fatty envelope; but contrary to what occurs in bacillus of tuberculosis this fatty envelope can be readily dissolved off with alcohol so that after boiling for ten minutes in alcohol the organism no longer takes the peculiar stain, but stains like any other form.

Dorset, of Washington, has shown that Sudan III. is a stain for the tubercle bacillus on account of its affinity for fatty materials. My observation confirms this, but shows that Sudan III. will not stain the grass bacillus, the reason being that the alcohol in which the dye is dissolved removes the fatty envelope before the dye can act.

I am continuing my observations upon the pathogenesis of this form.

The chief interest in this form and in others which have recently been discovered, lies in its evident rather close relationship to the bacillus of tuberculosis. Its practical importance arises from the danger of confusing it with the tubercle bacillus in butter and milk.

One specimen of suspected rabies was received in the laboratory, but owing to press of work I was unable to make the inoculations myself. I asked Dr. Goldie, of the University Medical Department, to do this for me, and he has inoculated two rabbits. As yet neither have shown symptoms, although about four weeks have elapsed since the inoculation. Although it is not yet possible to speak positively the presumption is that the case was not rabies.

A number of tests of glycerinated vaccine have been made, but the work is not yet completed.

A MEDICO'S VISIT TO RICHMOND, VA.

BY W. A. YOUNG, M.D., TORONTO.

So widespread has the scribbling fever become, that it seems hardly an impertinence to "stop over one train" in a city and then write "impressions" thereupon. We are becoming so accustomed to take everything compressed into tablet form, that the scribe is supposed, like little Willie of story fame, to swallow the entire dinner tablet (of facts and fun) while the blessing is being asked.

The Richmond that extended a welcome to the 1899 meeting of the International Association of Railway Surgeons was smiling and very gracious. Her welcome, in two senses, was warm. Forty years ago Thackeray said, "Richmond is the merriest place and most picturesque in America." At that time no doubt it was true; but by the irony of fate the bright young city soon became rocked in the cradle of fire and blood—the horror of war. The years have passed, and now she presents a picture of historic interest, beautiful landscape, and wonderful commercial industry. In her streets the sounds of the up-to-date trolley car mingle strangely with the tingle of the bells of the old mule cars; the rickety cabs rattle along side by side with great drags laden with the merchandise that bespeaks large manufacturing interests; the graceful women of the South are outnumbered in the streets and parks by the gay darky ladies; and the pickaninnies—ye gods, they are in shoals, attired in wonderfully starched garments. Here, may we say, let the South settle the great negro problem we hear so much about. The Southerners understand it in its length, breadth and multiplicity, as the Northerners never can. The former treat their speckled beauties wisely and well, and yet get an odd good day's work out of them, and always the semblance at least of respect and obedience.

Passing from the streets into that palace of light, the Jefferson Hotel (the headquarters of the Convention), we soon were feeling the hearty handshakes and listening to pleasant remarks about "last year in Toronto," and immediately the Canadians were made to feel at home.

Of the scientific side of the meeting these feeble remarks have naught to say. A report appears in another part of this issue.

Many an hour was given for enjoyment and sight-seeing. Among the numerous places of interest visited were the Capitol Square, with its historic buildings and handsome monuments, also a drive around Hollywood Cemetery, the resting-place of many illustrious dead. The day previous to our visit had occurred the annual decorations of the graves of the soldiers, and fragrant with the breath of flowers was "God's acre." Jefferson Davis' resting-place was a veritable garden of roses, and now and then a breeze

from the river stirred gently to and fro the old flag that has stood sentinel so long above the dreamless sleeper. The view across the James River from this point reveals Libby Hill, where the prison stood, and the long stretches of hill, dale and winding river form an exquisite picture.

After leaving the cemetery, the places of interest visited were many and ever increasing—among others the quaint old church where Patrick Henry uttered his famous sentence, "Give me liberty or give me death!" Oh, what a harvest for the camera person! He was plural, and, pardon, messieurs, very humid. His face called to mind old Joe Murphy's property tear, that was ever present as he sang "A handful of earth from the land of my birth." Of course the Richmond tear was the genuine brand, nothing of glycerine about it—the kind that trickles—while the camera fiend focuses his lens as the thermometer in the shade round the corner is practising high C, and trilling on the words ninety-five.

The evening was the first day, and it brought a reception, tendered by the physicians of Richmond and their wives, to the delegates. Held in the Jefferson Hotel, it proved very enjoyable, and the pleasure was added to by the fine singing of a negro quartette.

Few and far between are the sojourners in Richmond who do not visit the Valentine Museum,* the gift of the late Mann S. Valentine, whose name is an honored household word in Virginia, and whose generosity to his native city has been twice blessed. Would that time and tide had waited for us and allowed us to linger among the interesting *objets des beaux-arts* contained in this museum. Would that we could thank its presiding genius, Mr. Jones, who spared himself not at all that we might enjoy all things freely. Long will the memory of our visit to the Valentine Museum and its old garden linger with us, ever fragrant with the perfume of the magnolia blossoms.

Mr. H. L. Valentine invited us to a tally-ho ride around Richmond, and gave us the new experience of a visit of inspection to one of the largest tobacco factories in the South. We were shown every stage of the manufacturing process—first, a peep at the niggers as they sat on the floor and picked asunder the leaves; then a glance at the big vats filled with boiling sweetness of licorice and sugar; then the drying-room with its huge machines, and its blinding heat, 100 degrees Fahrenheit; then the bundling or rolling (before being subjected to enormous pressure) in the factory. In this department we beheld hundreds of niggers working away and singing the old hymn:

"Must I be carried to the skies
On flowery beds of ease,
While others fought to win the prize,
Or sailed through bloody seas?"

How they sang! Here and there a splendid basso, or a clear true tenor made us linger and wonder at the exquisite harmony of

* Half-tone illustrations of which we print on pages 42, 45, and 48, of this issue.

sound, as we looked at the gruesome creatures. Slowly the "music and the meaning" died away, but soon an old darky led off, "We're marchin' through Georgia." And so we left them, these strange workers, with the hope that all their toil would surely end in smoke. Suitable souvenirs of the occasion were kindly presented to all the party by the gentlemanly young president of this immense concern, Mr. Williams.

The Young Men's Business Club, invited the I.-N.A.R.S. to a sail down the James River to Dutch Gap. The banks of the river are pregnant with "war-time" interest, and many were the thrilling stories to which we listened. A *dejeuner* was served on board the boat, and the trip was very interesting, although its pleasure was slightly marred by a severe thunderstorm which came on just at the starting time.

The gracious private hospitality of the people of Richmond was indeed delightful and very much appreciated, especially perhaps by the Canadians.

With genuine regret we said adieu to Richmond after the close of the Convention, to spend awhile sporting with the mermaids at Old Point Comfort. As we took train, the last words of the darky Jehu who took us the station were, "Thank you, sah; you've got a pretty mornin' for gwine, sho'."

CONSTIPATION; SOME OF ITS EFFECTS AND ITS NON-MEDICINAL TREATMENT.*

BY E. S. PETTYJOHN, M.D.
Medical Superintendent, Alma Sanitarium.

THE large number of people suffering from constipation and its effects, and the clinical difficulty met in obtaining relief therefrom, leads to the conclusion that the full signification of this affliction and its deleterious influence are not comprehended either by the public or the profession.

In its reciprocal influence this condition sustains both a causative and a resultant relation. Constipation as a functional disorder may be defined as an abnormal condition of the great colon and the entire intestinal tract, manifested by the unusual retention of excrementitious material, both as to quantity and time of evacuation. It may be owing either to diminished action of the muscular coat, to the diminished secretion from the mucous membrane, or both, to defective innervation, to habits and occupation, climate or diet, which are the chief causes.

A study of the history of thirty-six cases shows that about 60 per cent. of patients are suffering directly or indirectly from this ailment, and that the number is proportionately larger among women than among men, probably due to the sedentary life.

* Written specially for THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

Congenital constipation may occur dependent upon the anatomy of the colon, the water being absorbed by the reduplication of the colon itself, especially the descending part, as that part is larger in infants in proportion as compared with the ascending and transverse, and hence is liable, by being crowded down into the pelvis, to flexures and reduplications that favor impaction and absorption.

In adults the transverse colon is most liable to variation in length and position, and being smaller in diameter than the ascending, aside from congenital malformation, may be bent downward almost to the pubes by the long-continued distention, forming a sharp bend at the sustentaculum hepatis and at the splenic flexure, as has been found in two cases under the writer's observation.

In considering this condition, we regard individual habit and idiosyncrasy and compare with the rule, as persons do become constipated *without notable or sensible inconvenience to themselves, without manifesting any of the local symptoms, and while having regular and apparently sufficient daily evacuation.*

We come to the consideration of constipation more on account of its relation to other ailments and the entire system, than because of the mere inconvenience induced. The intestines and colon and the rectum are considered as digestive, eliminating and secreting organs, and also as organs of absorption.

With their great extent of retiform tissue inclosing a multitude of blood vessels and nerve ramifications, with their mucous follicles and valves of retardation, with their glands, lacteals, arteries and veins, the powers of retention and absorption belonging to this tripod are beyond compare. The wonder is that all the contents which enter are not taken into the circulation.

While the colon and rectum have not the digestive office we have long supposed, their absorptive power is greater than has been thought, and the quantity absorbed is in proportion to the time of contact and dilution of the substance. While these organs seem in a certain sense endowed with the power of selection, they do absorb digested aliment, medicines and deleterious material with about the same avidity.

The intestinal nervous system, the abdominal brain, is noticeably complex. Filaments are received from the pneumogastric, the sympathetic, and from the lumbar cord. After having been distributed to the plexus of Meissner under the submucous coat and the plexus of Auerbach between the muscular planes, branches thence supply the glands, muscles and blood vessels. Some preside over the absorbents and secretions, others over the peristaltic muscular movements, others over the intestinal circulation. Not only do these medullary and ganglionic systems direct the functions of the intestines, but through them the nerve centres of the brain have a direct influence over the entire apparatus. Since all functional action in the system is reciprocal, it follows that the functional activity of the chylopoietic system must affect the nutrition of the brain and the entire nervous system.

We acknowledge that human life is a constant professional activity of elimination and repair, metabolism occurring everywhere. Observation is demonstrating the part taken by bacteria and microbes in this process in the mouth, stomach and intestines. In the chemic, fermentative and putrefactive changes thus occurring, ptomaines are being constantly produced, which, when absorbed as toxic and excrementitious substances, produce retrograde changes in the quality of the blood, diminution of the red blood corpuscles, and by supplying an infected or imperfect nutriment to the brain, become a prominent factor in the production of cerebral anemia and nervous debility only limited in its effect by the shortening of the microbal longevity from the effects of its own secretions. If this deficiency of nutrition or the supply of toxic material be continued, the increased nervous irritability is followed by a decrease, and withdrawal of nourishment is followed by brain exhaustion.

From the normal intestine Babes isolated five species of bacteria, whilst an enormous number of micro-organisms were found in the large intestine and feces. Bouchard says: "The conditions favorable for the maintenance of putrefaction are so numerous that we ask whether digestion can ever go on normally?" While the hydrochloric acid of the stomach neutralizes the infectious agents, they are passed into the intestines in a state of latent activity, when fermentation again begins. While the bile arrests fermentation, it is also capable of putrefaction, which is no doubt one of the causes of the offensive breath in constipation. We thus find the small intestine in a condition to pass products of putrefaction and also toxic substances into the blood current. Since our most inoffensive and valuable foods (meats) produce toxic substances; since the putrefactive bile contains poison, and the putrefactions of undigested residue produce poison, and the fecal matter is toxic; with all of these shut up in the intestines and colon, how can the guilty (those who do not believe in defecation), or even the innocent, escape destruction.

If the kidneys are excreting well, some of the toxic substances escape through the urine, and if the skin is eliminating, it furnishes relief, but these are rather remote resources of exit for so large a quantity of excrement when the way to the outside world is so close at hand through the rectum.

Hypochrondria, nervous depression, nervous headaches, functional neurasthenia, migraine, vertigo, disorders of nerve sensibility, noises in the ears, dyspepsia and depression incidental thereto, with a long train of psychic, nervous and nutritional troubles, are directly or indirectly the result of constipation. Even when many functional difficulties seem to be the primary disease, they only form an arc of a vicious circle begun with the nucleus of constipation.

The mechanical pressure against mesenteric blood vessels by over-distended bowels, especially if long continued, causes increased

flow of blood to the brain and a temporary hyperemia with its concomitant symptoms, like an Esmarch bandage about a limb, or a sudden cooling of the surface of the body which in winter is the cause of more frequent cerebral hemorrhages than at other seasons, or like the sudden suppression of the menses or of an hemorrhoidal discharge, or even the straining at stool, all of which are to be avoided in apoplexy and cerebral congestion, on account of the increased pressure of blood in the brain which they produce.

The nervous system, as the master tissues of the body, needs the highest nutrition, and hence is most easily disturbed. It is fed in its truest sense by the overflow of nutriment after its refinement and elaboration in other tissues. Whether the nerves are nourished by the plasma reaching the axis cylinder at the nodes of Ranvier or not, we believe with Waller that the nutritional activity of nerve fibre is in the direction of its normal physiologic activity. Any inhibition of this function will lower the nerve excitability. A long period of repose not only lowers the nerve excitability, but, if continued beyond a certain limit, atrophy and degeneration occur in the nerve substance itself.

Continued unusual pressure produces excessive activity of the nerve supplying the part, excitability is finally abolished and exhaustion of the nerve occurs locally (as in over-distention of the bladder), or it may even produce a neuritis. A constantly overloaded condition of the bowels may produce either of these local results on the nerve filaments themselves. The effect of this travels backward to the controlling ganglia in the lumbar cord, and defecation, to some degree a reflex act, when its directing centre is not sensitive to the controlling impulse of the brain, does not occur promptly, and the constipation thus reacts upon the whole system.

In patients who complain of symptoms referable to the spinal region, and where there is entire absence of anatomic affections of the cord, and often when these manifestations are united with cerebral symptoms and there is general disturbance of the entire nervous system with a neurotic heredity, it is very frequently a functional trouble. Such a case recently came under my care (from the country), a Miss M., aged 32 years. She had previously been afflicted with convulsions, supposed to be epileptic at and since puberty, but had had none for two years previous to my seeing her. She complained of attacks of severe occipital pain, when she would become nauseated and dizzy. At the same time she would have a convulsive-like attack with irregular tremors and a peculiar nodding and swaying movement of the head, which she said she was unable to control. She also had pain in the cervical and lumbar region, deep-seated. These attacks occurred irregularly from one to twelve weeks apart. She was an invalid each time from five to fifteen days. She had been treated for several years and informed by her physicians that she had epilepsy and disease of the spine. Thorough examination revealed absolutely no signs of spinal disease nor anatomic disturbance of the cord. After three months

of treatment she fully recovered, besides having gained about eighteen pounds in weight. The late Dr. Jewell believed and taught that the effect of constipation might produce a condition of the brain akin to, or that could be classified as, transient mania.

The first elements in curative treatment I consider good food and good digestion. The diet should consist of coarser foods such as would leave a residue and aid in increasing the bulk of fecal accumulations. Broths, fish with the skin, fresh meats not too tender, whole-wheat and graham bread, mush, hominy, corn bread and all green and watery vegetables, baked potatoes with skins, and cereals containing hulls and fine seeds, prunes, figs, apples with the peeling and all fruits generally. Rest in the recumbent posture for a half hour or more both before and after eating is of value.

Massage on anatomic principles I place first in the mechanical treatment. The manipulations should not be used until two hours after a meal. The thighs should be flexed and the abdominal walls relaxed. The treatment should be given dry, stimulating first the skin, then the walls of the stomach, the different sections of the colon and the intestines. Petrissage given so as to impart an oscillating and vibratory movement, combined with the varieties of tapotement, are the best forms of treatment. Cases of obesity and atony of the muscular coats and chronic intestinal and gastro-intestinal catarrh are relieved in two to four months. The intestinal secretions or increased obstruction of the bile-duct is relieved, the peristaltic action is stimulated, and the contents of the sigmoid flexure and entire colon are pressed toward the rectum. If there are biliary calculi no pressure should be made on the adjacent parts, although usually pressure should be made over the fundus of the gall-bladder, to assist the bile toward the intestines. The stimulation of the skin, which is here supplied by the last seven dorsal nerves the same origin as the splanchnics, as well as the plexus of Auerbach, and the mechanical effect of moving pressure do bring favorable results.

In the use of the cannon ball three or four pounds in weight, the patient or operator should be thorough and systematic. The ball should be rolled over the entire abdomen, being used for five or ten minutes morning and evening, the treatment ending by the patient balancing the ball for a few minutes on the navel.

In gymnastics all movements that use and strengthen the abdominal muscles, such as lying on the back and raising the limbs perpendicularly, the flexion at the hips, twenty or thirty times each morning and evening, rowing, horseback riding and cycling, are helpful if use regularly. While it is best to have a definite hour, that is not essential, but when a time is fixed, if the preceding half hour is devoted to the voluntary contraction of the anal sphincter muscles, the reflex effect is said to aid in stimulating the peristaltic action. Time should be given, and one should go for relief on the first prompting.

The faradic current of sufficient strength to produce contraction

of the different portions of the intestines and colon is helpful. The galvanic current, the cathode in the rectum, large anode over abdomen, repeated daily at the same hour is effectual.

Hydro-therapeutics have proven successful remedies in the author's practice. Drinking large quantities of cold water on arising and an hour before meals, and two or three times after food, taking during the day seventy to eighty ounces, beside that with the meals, is of exceedingly great value. This remedy, with regulation of habit, has cured many cases.

Fomentation to the bowels, stomach and liver daily and a cold pack to the bowels at bedtime have been successful. Alternation of hot and cold to the spine and the cool bath have shown results.

The difficulty I find in the use of any, or a combination of these measures, is to induce the patient to be systematic and persistent in following directions. But I am thoroughly convinced, that by these means producing local and constitutional effects, more satisfactory results are obtained than with medicines, and when the patient recovers, he stays well.

That constipation has a psychic and moral effect the laity recognizes, and we will all agree with the author who says: "Those persons whose bowels are freed by an easy, regular movement every morning, so soon as they have breakfasted, are meek, affable, gracious, kind, and 'no' from their mouth comes with more grace than 'yes' from the mouth of the one who is constipated."

Alma, Mich., May 20th, 1899

Not an Insurer.—The supreme court of Minnesota says that a physician or surgeon is not an insurer that he will effect a cure. Neither is he required to come up to the highest standard of skill known to the profession. When he accepts professional employment, he is bound to exercise only such reasonable care and skill as are usually exercised by physicians or surgeons in good standing of the same school of practice. And where any person claims a cause of action for neglect to exercise the required degree of care and skill, the court adds, in Martin *vs.* Courtney, that the burden is upon him to prove such neglect. In this case, it goes on to state, perhaps the most serious charge against the defendant was in not making a second amputation at the ankle. Concerning this, the court says that he was required to exercise ordinary professional skill and judgment in determining what was best to save the patient's life, but conservative surgery required that as much of the foot as possible should be saved. A surgeon, under the circumstances, had to take into account the great value of a foot, especially to a laboring man. In determining where to make the amputation he would also have to take into account the degree, as well as the extent, to which the foot was infected; also the general health of the patient and his power to throw off or resist disease; and then, in view of all these considerations, act in accordance with ordinary and reasonable professional skill.—*Journ. of Amer. Med. Assoc.*

Gynecology and Obstetrics.

. . . IN CHARGE OF . . .

GEO. T. McKEOUGH, M.D., M.R.C.S.(Eng.), AND J. H. LOWE, M.D.

TECHNIQUE OF ABDOMINAL SURGERY.

Dr. Hunter Robb (*Medical News*, May 27th, 1899) read a paper before the American Gynecological Society recently, entitled "Sixty-Five Consecutive Abdominal Sections without a Death," and gave his technique, which is as follows:

There should be a thorough organization of the staff that is to assist at the operation, each assistant thoroughly understanding his or her particular duties, and all should work together harmoniously. The first assistant should assist the operator directly, the second having charge of the instruments and handing them to the operator or first assistant as needed. The third assistant takes charge of the dressings and sponges. The fourth assistant devotes all his attention to the giving of the anesthetic, while the nurses watch and are ready to be of service when called upon. Of course, the most thorough asepsis of dressings, instruments, pads, the field of operation, and the operator and his assistants' hands, is carried out in the usual manner. The patient should be under observation for several days previous to the operation, and a thorough study of the excretions should be made. A careful physical examination should also be made, and the blood before and after the operation carefully studied. The patient's general condition should be improved as much as possible before the operation. Rubber gloves, sleeves and skull caps should be used by the operator and his assistants during all operations, for by their use the danger of infection is materially lessened. The sponges are best made of pads of gauze, thoroughly sterilized, which is a much easier proceeding in this case than when sea sponges are used. About 500 c.c. of hot sterilized normal salt solution should be used to flush out the abdominal cavity at the conclusion of the operation, and then about 500 c.c. or less should be allowed to remain in the cavity. When drainage is necessary it is best accomplished by means of a gauze drain.

The patient after the operation should be put to bed in the postural position, as in that position drainage is best obtained. (The postural position is the elevation of the patient's body after operation to a sufficient height to start the flow of collecting fluids from the pelvis towards the diaphragm, and thus promote the rapid

elimination by the normal channels of exit from the peritoneal cavity, of infectious matter and of vital fluids which may stagnate in these pockets and form a culture medium for pyogenic micro-organisms.—J. G. Clark, Johns Hopkins Hospital, Baltimore.) Shock should be combated by hypodermic injections of strychnine and enematas of hot coffee. If thirst be extreme the patient may be given a few sips of hot water, or this failing an enemata of hot water should be administered. No morphine should be given unless there be a special indication for its use. The bowels should be opened on the second day by a moderate dose of calomel followed by an enema of glycerine and soapsuds. Unless the patient pass her urine voluntarily, she should be catheterized every eight or ten hours. The postural position should be maintained at least for the first ten hours, but should there be much pain or restlessness the patient may be moved on her side for ten minutes and then the postural position be resumed. Should the tympanitis be extreme, a metal tube should be passed. This failing, an enema of turpentine, sweet oil and water should be administered. Turpentine stupes should also be given a fair trial. G. T. M'K.

The Treatment of Puerperal Septicemia by Antistreptococcic Serum.—Walters (translations of the Obstetrical Society of London, 1898—*Amer. Jour. Med. Science*, June, 1898) reports the case of a multipara who became septic after an incomplete abortion. Although the uterus was curetted it was not completely emptied, and several days afterwards the patient expelled parts of a macerated fetus. She became intensely septic, the temperature rising to 103°, the tongue being very dry and the patient's pulse rapid. Two injections of serum, 10 c.c., resulted in immediate and marked improvement. The patient ultimately recovered. Routh, in discussion, said he had treated five or six cases and had seen a positive result in one. He thought that a positive diagnosis of streptococcus infection should be made before the serum was used. Robinson had treated seven cases of puerperal sepsis with serum—five of these died and two recovered. In one the injection had an immediate effect, and a membranous vaginitis was present, but rapidly disappeared. Phillips had seen one case in which the patient's recovery must be ascribed to the serum. Twenty injections were given in an illness of six weeks. Cullingworth did not believe it to be practicable to wait for a positive diagnosis of the presence of streptococci; he would inject the serum when the patient was septic. G. T. M'K.

Eclampsia.—B. C. Hurst (*Med. Record*, March 4th, 1899) administers chloroform during the attack. As soon as the convulsion passes 15 drops of tr. veratrum viride is given hypodermically and

a drachm of chloral by enema. Two drops of croton oil diluted with a little sweet oil are placed upon the tongue. Diaphoresis is induced by hot packs and extra bed clothing. A pint or more of normal salt solution should be injected under the breast or several quarts of the solution per rectum, the aim being to flush the kidneys and thus rid the system of the toxine as quickly as possible. If convulsions occur the veratrum may be repeated in 5-drop doses if the pulse is quick and strong. If the face is congested and the pulse full, venesection enough to reduce the pulse should be employed. The chloral may be repeated if necessary. Stimulants are to be used if the pulse is weak and rapid. If the convulsions cease and the patient is in a stupor, but can be aroused enough to swallow, dessertspoonfuls of concentrated solution of Epsom salts should be given every 15 or 30 minutes until free catharsis takes place. G. T. M'K.

Disinfection of the Hand with Alcohol.—Ahefeld (*Amer. Jour. Med. Science,* June, 1899) wonders that surgeons assign so little value to alcohol. The statement of Mikulicz that it does not destroy the bacteria in the deeper layers of the skin, he believes to be erroneous. Alcohol having a strength of 96 per cent. is preferable to weaker solutions. Bichloride solution is unnecessary, and other antiseptics in order to be efficacious must be used in such strong solutions as to injure the hands. The writer believes that the method of disinfecting by scrubbing with soap and hot water and then with alcohol will be preferred in the future by both surgeons and midwives. Moreover, brushes, catheters, intra-uterine tubes, etc., can be disinfected in the same way. A 50 per cent. solution of alcohol is useful in disinfecting the external genitals in obstetric practice. G. T. M'K.

The Present Position of the Question of Operation in Uterine Fibroids.—Dr. E. Stanmore Bishop (*The Lancet,* January 28, 1899), in a paper read before the Clinical Society of Manchester, concludes as follows: "Since all fibroids, however large, must at one time be small, and since the risks of removal increase *pari passu* with the size of the tumor and the amount of blood lost, it would seem that now we have arrived at this: so long as fibroid tumors give rise to no marked symptoms and show no tendency to enlarge, they may be ignored; if, however, they are definitely increasing in size, it is wiser to remove the entire uterus, leaving all the ovarian tissue possible, whilst the tumor is yet fairly small. In this way the risks of operation will be minimized as far as possible, the patient will be in the best condition to ensure success, and will be saved most of the miserable but inevitable results of this disease.

G. T. M'K.

Surgical Pathology.

IN CHARGE OF . . .
THOMAS H. MANLEY, M.D.

UNIVERSAL TORSION AS A HEMOSTATIC COMPARED WITH THE LIGATURE, ELECTRICITY AND ACUPRESSURE.

BY J. D. JUSTICE, M.D., QUINCY, ILL.,

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THE antiquity of torsion as a method of artery obturation is a well-established fact. Just where it began is a matter of conjecture. We have evidence that Galen, Ætius, Ammussat, Velpeau, and others were successful in controlling hemorrhage by this method. Some failures by Louis and Delpech, together with an unfavorable opinion given by Baron Dupuytren, so discouraged the use of torsion as to practically shelve this method for many years.

Thomas Bryant of Guy's Hospital, London, closed the major vessels in hundreds of amputations without a single mishap. While it is on record that M. Ammussat satisfied himself in 1829 that twisting an artery was sufficient to permanently close its lumen, and made decided progress along this line, we cannot help but think that James Syme should bear the same relation toward establishing on a solid footing free torsion as a hemostatic, that surgical lore attributes to Ambrose Paré in reviving the ligature as a permanent method in controlling bleeding vessels.

Our own countryman, the late Prof. J. B. Murdock, certainly deserves first place in reviving this method in the United States. In 1872, while his colleagues were using torsion to close arteries the size of the radial and ulnar successfully in the Western Pennsylvania Hospital, at Pittsburg, Pa., he was, for the first time, induced to try this method. The kindly way in which the wounds healed, with no secondary trouble, gave him an incentive which removed his timidity so thoroughly that he employed it to arrest the blood of the severed popliteal after an amputation, and later, the femoral. There is no special record of the number of times he employed torsion in the larger vessels, but the hospital records show no less than 651 of the major arteries closed by twisting from 1872 to 1886.

Sir J. Simpson has full credit for the plan of acupressure, which needs no comment here on its usefulness or technique.

Cautery also is a method well known. The ligature, the most commonly practised of all the methods now in use, has for its foundation the same principle in the control of blood as the one evolved by free torsion, namely the severing of the middle and inner coats of the vessel.

Homologous ligation of arteries, so far as I know, was first successfully practised in the human body by Prof. Thomas H. Manley, of New York City. This method, in technique, is to use enough of the artery to be closed, to form a knot upon itself.

While there are other methods well known in surgical practice, both modern and ancient, of artery obturation, the most commonly practised and relied upon of any to-day are those of the ligature, torsion, cautery and electricity. The latter is practically of very recent origin, and consists in suitable shield forceps connected with an electric current of sufficient voltage to raise the temperature to from 180° to 190° Fahrenheit, which is just high enough not to char or burn the tissues, but simply to desiccate or cook them, forming a permanent closure of the vessel. Dr. A. J. C. Skene should have credit as one of the leaders in electro-hemostasis.

To fully comprehend how any method of traumatism permanently controls a cut or torn artery, we must familiarize ourselves with its histology. A brief review of the structural elements is here in order.

The three coats of all arteries have a structural similarity throughout the body, modified only in accord with a demand for strength or elasticity, or both. It is only important for our purpose that we observe the internal and middle coats, in order to comprehend that a twisted vessel can control blood as satisfactorily as the ligature of any of the known methods of artery obturation, and that the size of the artery only adds to the ease with which torsion does its work. The tunica intima is composed of a somewhat complicated structure, in that its endothelium supports a double layer of multiple-shaped cells, retained by connective tissue of special type, and in addition to this layer we have a fenestrated layer of elastic membrane that is very strong in elastic elements, so that when injured to any considerable extent, it is readily closed upon or among its own meshes to form an occlusion to the vessel lumen.

The tunica media has also an elastic tissue predominance, running transversely, or around the artery, giving a constricting force that permanently compresses the already tangled longitudinal internal coat.

To understand why torsion becomes safe in the larger, or largest artery, we need only remember the anatomical fact that the larger the artery the greater the supply of fenestrated elastic membrane constructing the tunica intima, whose cells pave the vessel walls largely in a longitudinal direction, and that the middle coat is circular, and composed of muscular and elastic connective tissue, whose elasticity increases in proportion to the size of the

artery. The external cellular coat is also elastic and becomes thicker in the smaller vessels.

With the anatomical structure well in mind, there should be no difficulty in the conclusion that torsion of any vessel is as safe, permanent, and unyielding as it is possible to obtain by the ligature.

All authorities agree that to permanently control hemorrhage with a ligature the force must be sufficient to cut the middle and internal coats of every vessel. Free torsion, properly executed, does precisely this thing, added to which we have the external, or cellular coat's elastic tissue fibres directly meshed, which aid in retaining the already thimbled internal and middle coats permanently in place.

A common argument against torsion in any vessel, and more especially the larger arteries, is that it will most likely fail in atheromatous conditions, or where the artery or arterial coats are very friable from any cause. I am unable to see why the ligature in such cases can have advantage not accorded free torsion.

The first large artery that I saw torsioned was the popliteal after an amputation by Dr. Johnston at the St. Mary's Hospital, Quincy, Ill. I stood a few feet in front of the artery as the surgeon seized and twisted it before removing the Esmarch, then quickly unsnapping his hemostat I intuitively stepped aside, feeling certain that a stream of blood would spurt from the freed vessel. The artery only made a few rapid recoil turns and became quiescent. Notwithstanding the fact that all vessels were under the grip of the tourniquet, the awful horror of a trunk artery suddenly turned loose caused me to forget it. To-day I have the same restful confidence in torsion that had formerly existed after applying the ligature. Except in his abdominal work Dr. Johnston has never known the trustfulness of the ligature, for the reason that his preceptor, the late William A. Byrd, relied wholly on torsion to permanently control all major arteries outside of the abdominal wall.

During the years of the late Dr. W. A. Byrd, above referred to, his pupil, Dr. Otis Johnston, informs me that no case of secondary hemorrhage, where controlled by torsion in atheromatous disease, ever occurred in his practice. Dr. Johnston makes the same report, and since I have been associated with him as his chief assistant I have witnessed not an inconsiderable number of amputations, below the knee, above it, below the elbow, and at the shoulder; in atheromatous degeneration, without a single mishap following torsion of any vessels; and he claims that out of more than one thousand major operations he has never had a secondary hemorrhage. While he has never used any other method for closing a cut vessel than torsion, except in the abdominal cavity, he has recently, in my presence, in a number of instances, trusted to torsion of the uterine and ovarian arteries. In two of these cases double pus tubes were removed, one of them containing in its sacks

not less than a quart of pus in each, reminding us that if septic influence has to do with the degeneration of an artery in any of its coats, these cases would prove an exception. In the first case, that of a fibro-cystic tumor, the ligated uterine lost its ligature by manipulation of other tissues. The hemostat being applied directly to the bleeding vessel it was torsioned, and permanently closed. The same thing happened to the ovarian artery, with the same procedure. All these cases made uninterrupted recoveries.

In numerous cases he has torsioned good-sized arteries in operations about the intestines, and in no case had any cause to regret it. Naturally we are feeling our way along this line, and believe we can reach a position to do away largely with the ligature in any form, even in the abdomen. I am aware that there are not a few cases on record where amputations have been performed and ovarian tumors removed, where no vessels were tied, or in any way molested tending to close their lumen, and they did not bleed. These are exceptions, and no such cases came under our observation, in either section or major amputations; so that they cannot be claimed as against torsion.

All will agree with me that an amputated femur, with the flaps closed upon vessels whose lumens have been closed by twisting, thus leaving nothing foreign in the wound, can have everything to do with rapid healing without the sequences possible by a ligature being removed, one, two, or three months after the patient has left his bed. Again, in pus cases, where the abdomen is the field, to keep a ligature out of it means a future for the patient that ligatures, to say the least, seriously modify, to say nothing of the feelings of the physician who subsequently removes from two to five ligatures from the vault of the vagina, or through an induced sinus at or near the original incision.

While timidity on the part of every surgeon plays a prominent part in the matter of trusting to a few turns with a forceps to control blood after the removal of the femur from its solid moorings, habit, or one's individual method of hemostasis in such a trying period, is the best plan to allow restful subsequent hours to the operator; or, in other words, a feeling of uncertainty attached to an untried plan compared with one giving constant success, tends to veto an ambition to advance. This idea holds good in medicine as well as in surgery—"Nothing succeeds like success."

It is an established fact that two methods in the technique of torsion are understood and employed by different men in accordance with their peculiar fancy. We understand by "limited" torsion that the artery is grasped with one forceps while a second is fastened to the free end, and with it twisted against the first forceps, six or eight turns being usually sufficient to close the vessel. "Free" torsion is that form in which the artery is grasped at its free end with the hemostat, Dr. Johnston's plan being to twist the artery until the middle and internal coats can be felt to yield, then remove the forceps, when

the vessel will recoil, absolutely and permanently controlling the blood. There is no doubt that six or eight turns, of any vessel, is enough, ordinarily, to control the current. The doctor has always claimed that the larger the vessel the more easily torsioned, and my observation and limited experience prove this theory correct. It is without doubt wholly unnecessary to use a second forceps.—*Medical Standard.* T. H. M.

HYSTERECTOMY FOR UTERINE CANCER.

"That a vaginal hysterectomy stops hemorrhage and fetid discharge and relieves pain, there can be no question at all. But this is only a temporary improvement. And for this dire disease even a temporary alleviation of these symptoms would be an advantage, were it not that, with the recurrence of the disease, the ultimate pain and suffering are greater than if it had never been touched at all."

Dr. Croom's experience extends to over 260 cases of malignant disease of the uterus; of these, only 14 have fulfilled all the conditions requisite to justify hysterectomy with expectation of success. Vaginal hysterectomy was performed on these 14 cases, and every one of them died within one year, with greater suffering than if they had been left alone.

Amongst these cases were several in which the disease was confined to the fundus, with no involvement of the broad ligaments, being typical examples of the desirable cases on which to operate. And yet in all the disease recurred in the peritoneum, and the patient died in great distress within the year.

Dr. Croom states that a woman's expectation of life after the diagnosis of cancer is made at its most initial stage, is from two to two and a half years, if it be left alone. The question, therefore, arises: Do women live longer lives and die less painful deaths if the uterus be removed, or if the disease be allowed to run its ordinary course? The author does not think that surgical interference is the better.

In reply to statistics from German sources—such as those of Leopold, who states, what seems to the author to be the most startling statement in surgery, that out of 76 cases 72 were well, and without recurrence, after one to five and a half years—Dr. Croom can only say that cancer in Germany must be one thing and cancer in Great Britain another; that the respective diagnostic skill of the two countries must vary considerably, or that women must present themselves to the German surgeons at a period when the disease is in its most initial stage.

Dr. Croom thinks that it is quite conceivable that, with a cancer very early diagnosed and operated upon, the prolongation of life is possible, although such has not been his experience. After a cancer has developed beyond its most initial stage, its removal,

he thinks, does not prolong life, and the subsequent death is infinitely more terrible.

It remains a moot question whether we have got a suggestion in the removal of the ovaries for the cure of inoperable mammary cancer, and whether the same solution may offer a possibility for uterine cancer. The author thinks the solution may still be found in treatment by some animal extract, or on the antitoxin principle.

From his experience in Edinburgh, Dr. Croom thinks that the surgical method of dealing with uterine cancer has done little either to ameliorate suffering or to prolong life, and that once a uterine cancer is recognized, palliative local measures and a happy euthanasia through morphia are the best solutions of the difficulty. He hopes and trusts, however, that a day may yet dawn when we shall have measures, whether therapeutical or surgical, of dealing with uterine cancer effectively, but he does not believe it has dawned yet.

Dr. Croom adds a note of warning with regard to hysterectomy for conditions other than cancer, such as fibroids, prolapse, subinvolution, and inflammatory diseases of the uterus and its appendages, and thinks that the operation is one which, from its simplicity, requires to be safeguarded.—*Edinburgh Med. Jour.*, December, 1898. T. H. M.

Electricity for Insect Bites.—Dr. Friedländer, of Wiesbaden, recommends galvanism to relieve the pain and irritation and to reduce the swelling caused by the bites of insects. The negative electrode is placed over the seat of the sting. It is effective in the case of gnat and wasp stings and would doubtless also be of service in neutralizing the poison of tropical insects.—*Medical Record.*

Acetanilide in Surgery.—Dr. M. D. Schmalhorst, of St. Louis, writes to us as follows: "At a boiler explosion two boys received numerous minor injuries, besides two very severe ones. On one there was a six-inch scalp wound, with fracture and depression. Hair, straw and all sorts of dirt were carried down and pinched between the bones. The skull had to be removed to the extent of two inches by two inches and a half in diameter. The scalp wound was very ragged and turned back on each side for two inches. A branch of the meningeal gave considerable trouble. Some gauze was used here, packed against the bleeding point. Otherwise acetanilide was the dressing. The whole wound was kept literally stuffed full, about two ounces being used at each dressing. The result was all that could be hoped for. A compound, comminuted fracture of the leg came out most beautifully with the same dressing. I have used it exclusively for three years. It is very cheap, it is non-toxic, and it can and should be used bountifully to get its absorptive qualities. It will clear up an infected wound quicker than anything I have ever used either in hospital or in private work."

Proceedings of Societies.

ONTARIO MEDICAL ASSOCIATION.*

THE nineteenth annual meeting of the Ontario Medical Association was held in the Normal School Building, Toronto, June 13th and 14th, Dr. W. J. Gibson, Belleville, presiding.

The following gentlemen were then introduced to the Association: Dr. Wilding, delegate from the New York State Medical Society; Dr. Christian Fenger, Chicago; Dr. Bowditch, Boston; Dr. J. C. Wilson, Philadelphia, and Dr. D. W. Montgomery, Los Angeles.

Dr. J. F. W. Ross presented the report of the Committee on Papers and Business, which was approved. In the absence of Dr. J. A. Temple, Dr. Wm. Oldright presented the report of the Committee on Arrangements. Approved.

A Case of Muscular Dystrophy.—Dr. Ingersoll Olmsted, Hamilton: The subject of this case was a married man, twenty-five years of age, who had come to the doctor complaining of wasting of muscles and inability to work. His family history showed that other members thereof had been afflicted with the same trouble. The patient was presented to and examined by the members of the Association, the peculiarity of his gait and movements noted, especially interesting being his manner of assuming the erect posture from a prone position. Wasting was most marked in the region of the scapulæ, deltoids, biceps, forearm and thigh muscles, whilst those of the calves and hands were moderately well developed. Winging of the scapulæ was especially well marked.

Dr. McPhedran stated he had examined the case with very much interest. It was an orthodox case of this kind but presented one or two phases of unusual character, especially the preservation of the trunk muscles. He thought there must be some degeneration of nerve fibres present in these cases.

Dr. Geikie thinks that, as we come to know more and more of this disease, destructive changes will be found existing in the nerve centres.

Dr. Olmsted in reply: With regard to what Dr. Geikie has said, he thought there was no question that extensive atrophy takes place without any involvement of the central nervous system.

Relapse in Typhoid Fever.—Dr. J. C. Wilson, Philadelphia, read a very interesting and able paper on this subject. He exhibited a number of temperature charts, and said that especial attention

* Reported specially for THE CANADIAN JOURNAL OF MEDICINE AND SURGERY by Dr. George Elliott.

should be paid to the condition of the gall-bladder as a causative factor in producing these relapses. He took this as his "working hypothesis," and proceeded to demonstrate the concomitaneous occurrence of a relapse with the renewed physical movements of the patient, the beginning of the administration of the more solid forms of food, the consequent peristalsis thus produced in the gall-bladder and the subsequent discharge of the accumulated contents of this cyst, containing large quantities of the bacillus typhosis, into the intestines, thus producing the reinfection and the relapse. This, he thought, must be due to intrinsic and not to extrinsic infection. Dr. Wilson spoke for some length on immunity, and concluded in this way: "Thus we have a 'working hypothesis' to explain relapse which may be set forth in these terms: intrinsic reinfection from the gall-bladder at a time when the intestines are stimulated by larger meals of a different character, an immunity not yet complete and reinfection at once without a period of incubation." He perfectly understands that the change in the blood serum which underlies the Widal test is not a process of immunity but a process due to the infection. He closed his admirable paper as follows: "That the histological changes taking place in the solids and fluids of the body, bringing about immunity, are also gradual, and if the 'working hypothesis' stands at all, it demands that complete immunity shall be established in the primary attack, otherwise intrinsic reinfection which gives rise to the relapse, could not possibly occur."

Dr. McPhedran thought Dr. Wilson's definition of relapse a good one, and he drew a very clear picture of it. We know that some of the cases of typhoid may be an abortive attack, and he saw no reason why relapses also should not be abortive. The question of the gall-bladder as being the source of the infection of these relapses is a very important one, because of the suddenness of the outbreaks of symptoms. He thought it might be due more directly to the toxins in the bile.

Dr. J. L. Davison quoted Fagge, who refers to cases in Guy's Hospital that had died from the sequelæ of typhoid, weeks and weeks after convalescence had been established, and on *post-mortem* examination, Peyer's patches were found still infected or still in a condition which showed evidence of the bacillus. In many cases the disease smoulders along for weeks, and while Dr. Wilson's hypothesis of the gall-bladder is a reasonable one, it hardly explains why we should have cases of relapse after thirty days and later, and therefore Dr. Davison thinks there must be other storehouses for the retention of the specific germs than that. The question of the number of relapses is a very interesting one. While Dr. Wilson stated he had seen as many as seven in a six-months' illness, the largest number he had seen in any one case was three. He instanced a case of recovery after perforation. The question of immunity was an interesting one in typhoid fever. From recent researches it appears that there are two immunity substances, one

which produces an antitoxin and destroys the action of the toxin in the body and thus serves to keep the patient alive; and the other, which is bactericidal in its action. It appears that we must have both of these in order that a patient may recover from the disease. It is this bactericidal element which has a large part to play in the destruction of the germ itself.

Dr. Thistle asked, why go to the gall-bladder when the bacilli are in the intestinal contents?

Dr. Wilson, in reply, stated the infection comes from the gall-bladder, because the toxin is accumulated in a great mass in a hollow viscus, which, under physiological conditions of low diet, may remain there; but when you begin to feed the patient at longer intervals with solid foods, the gall-bladder is suddenly stimulated to empty itself. Dr. Wilson did not exclude the intestine if the gall-bladder is quiescent. Under the condition of feeding small amounts of fluid alone, the gall-bladder is not stimulated to push out its contents.

AFTERNOON SESSION.

The Hon. G. W. Ross delivered an address of welcome to the Association. He expressed his pleasure at meeting the medical gentlemen of Ontario. "We look on the medical men of the Province as belonging to a class of progressive educationists which are of assistance to the department in maintaining the proper scientific spirit in the country." He spoke on the subject of tuberculosis, and said if the Medical Association of this province can throw out some hints whereby that disease can be banished, they will have conferred a great boon upon the people of this country. There is no profession to which the Province owes more than it does to the medical profession. In this instance he referred to the extent in which that profession had guarded all of us from contagious diseases, had improved sanitary conditions everywhere and made hospitals habitable. Speaking of the standards of education, he was in favor of keeping these up and emphasized having a good general English education before entering upon professional studies; and after four or five years of professional study, no one could say that the medical profession is not an educated body. The doctor is one of the most influential members of the community. Health in the Public schools next engaged his attention, and he exhorted the profession all over the Province to interest themselves in this most important object. Physical training and exercise should go hand in hand with mental development. He referred to the unhygienic condition of Public schools in regard to fresh air space per pupil, lighting, heating, etc. Improvements all along this line would tend to develop a good strong sturdy Canadian stock. Home lessons should not be imposed upon the children so far as the Department of Education is concerned. Examinations at too early an age were

injurious and harmful. The country must produce men, strong in mind and body, men with nerves that will endure the strain of public life.

President's Address.

Dr. W. J. Gibson, Belleville, expressed his thanks for the honor conferred on him, having been made President of the Association. In regard to serum therapy, it was a matter of congratulation to the profession to know that so many able workers are in the field. He instanced tuberculosis, and stated that the whole world was on the alert to discover a cure for this disease. More attention should be given to personal hygiene and cleanliness. It would be difficult to estimate what good purpose it would be to report all cases of tuberculosis to the health officers. It would be a difficult matter, however, to make isolation in all cases compulsory. He spoke of the number of diseases now treated with antitoxins. No doubt, investigators were on the threshold of important discoveries. Every member of the profession should investigate the causes of disease more carefully. Dominion registration under Dr. Roddick bids fair to become an accomplished fact. It is to be hoped some feasible plan may be adopted whereby the student may be spared the examinations and the expense of being licensed in another province. In regard to over-pressure in Public schools he was glad to know that the Toronto School Board had done away with final examinations. The combining of mental and manual work or technical schools is desirable. He spoke of the improvement in medical teaching in regard to there being more clinical instruction than didactic lectures, and the importance of laboratory work was emphasized. The public is indebted to the medical profession for the lives saved, suffering reduced and the calamities averted in civilized countries. Physicians stand in the front rank of the benefactors of mankind.

Dr. Bruce Smith moved, seconded by Dr. Harrison, that the President be tendered a hearty vote of thanks for his admirable address. Carried.

Symposium on Tuberculosis.

Sanitarium Treatment of Pulmonary Tuberculosis.—Dr. Vincent V. Bowditch, Sharon Sanitarium, Boston, said it was gratifying to notice the marked change of opinion in regard to the treatment of tuberculosis in institutions devoted to that work. Massachusetts had been the first State in America to establish sanitaria. He gave a short history of the Rutland and Sharon sanitaria. It was important to keep this class of hospitals for the incipient disease. He spoke of the educational influence of the hygienic methods employed in these sanitaria. Open windows, even in cold weather, was to be insisted upon as a special treatment of the disease. Patients have returned to these sanitaria begging to be taken back because they could not breathe in

their own houses. He thought much more could be done for the patients by having them treated nearer home. Much more can be accomplished by treating consumptives in these sanitaria than by treating them in their own homes. Thirty per cent. have been discharged at Sharon as arrested cases. Dr. Bowditch has never used the term "cure," believing that the term is unjustifiable until after a lapse of years and no symptoms returned. The causes of death in these cases: (*a*) advanced condition of disease on entrance; (*b*) intercurrence of some other disease; (*c*) too early departure from the sanitarium and return home to the unhygienic conditions. As to treatment, experiments were made with the so-called specifics. Oil of peppermint proved at times beneficial. Creosote was found to be beneficial as an aid to digestion. Antiphthisin proved negative. Had refrained from the use of the serum treatment. Abundance of fresh air, judicious exercise, pulmonary gymnastics and calisthenics form the base of all the treatment. Results at Sharon mean that sanitaria should be near all the large cities and towns. He congratulated the profession in Ontario on the establishment of the sanitarium at Gravenhurst, and spoke also of the necessity of having hospitals for the hopelessly sick. We take away the principal source of infection when we remove these from their homes.

Pathology of Tuberculosis.—Dr. W. T. Connell, Kingston, who was to read this paper, was unavoidably absent.

Earliest Diagnosis and Selection of Cases for Sanitarium Treatment.—Dr. N. A. Powell stated that for ten years he had practised in a part of the Province where phthisis is practically unknown. The diagnosis of early phthisis calls for what we understand by incipient or early phthisis — the pre-tuberculous stage. In this regard our views have changed materially within recent years. Up to the time of the demonstration of the bacillus, a case was considered early unless there were large growths within the lungs, and until gross constitutional symptoms had shown. There is an inherent tendency towards recovery in phthisis when recognized early. This leads to the question, How often is phthisis recognized in an early stage—in a stage before physical signs are manifest in the chest and before expectoration has commenced. A very slight proportion of such cases are recognized. Why? The teaching of the students in diagnosis is exceedingly efficient. Why are mistakes made outside and disease of the lungs not recognized until serious inroad has been made into the health of the patient? A part of it comes from the earnest belief that the physician's education has been complete though crowded. Medical students crowd the course in surgery and gynecology, but neglect physical diagnosis. He believes early diagnosis will depend upon close study and family and personal history. There are certain aids to the examination, such as the use of the fluoroscope and the tuberculin test. In regard to the state of the family history and the personal make-up of the patient, in the careful

examination, it is important to estimate weight and height together before you can arrive at anything of importance. The symptoms of early phthisis are uncertain. None of them upon which you can rely. A man who is in apparently excellent health may have serious pulmonary disease. It is sometimes important to notice any scars in the neck. As to cough and early hemorrhage, distinct hemorrhage, which comes with comparative earliness, are two symptoms of importance. The patient should be made to cough in the presence of the physician and any sputum thus gained should be examined. In regard to physical diagnosis, if you wish to estimate the value of a stethoscope, take a watch and place it on the table, then with the back of the hand on the watch, place the bell of the stethoscope in the palm of the hand and listen to the tick of the watch in this way. In examining a patient the stethoscope should always be used whose accuracy is above suspicion. The evening temperature running up two-fifths, three-fifths or one degree associated with morning pallor is one of the most important elements in early diagnosis. Dr. Powell spoke of the physical examination and said the patient should always be stripped to the skin and examined in a quiet room. If you can get association of relative dulness in the spinous fossæ with the slightest accentuation and conveyance of the whispered voice or any prolonged expiration, it is safer to treat such a patient as being probably tubercular. In a case presenting progressive loss of weight and loss of physical energy, if one can get a little wavy or cog-wheeled respiration near the lung, it is safe to treat such a patient as being probably tubercular. Personally, without having much basis to go on, he said that he was afraid to use tuberculin as a test for fear of lighting up tuberculosis. In a case of prolonged expiration and evening fever, he was very unwilling to try the tuberculin test. As to the fluoroscope, Dr. Williams, of Boston, has done perhaps the best work upon this subject. With this instrument it is perfectly easy to recognize excursions upwards and downwards of the diaphragm during respiration, the average excursion in the adult male being about 2½ inches. If it is notably lessened on one side, it would raise strong suspicion of the presence of tubercle. Dr. J. E. Graham took the position some years ago that there might be considerable advance in the condition without being recognized by even a trained observer. The apparatus of Roentgen is of positive value when a trained observer recognizes the movement of the diaphragm, and a man of expertness may recognize degrees of shading which will be of benefit in diagnosis.

Home Treatment and Prevention of Tuberculosis.—Dr. T. F. MacMahon read this paper, and first spoke of how we should treat the patient in his own home and what means we should take to cure the disease and stay its ravages. Without a specific germ, there could be no tuberculosis. The main source of infection is the sputum and then infected food. Prompt destruction of the sputum would go far towards the removal of the disease. The public gener-

ally and the patients generally must be educated to this fact. Instruct your patients never to spit on the floor or into a handkerchief. Sputum should be received into proper spit-cups. That the danger from handkerchiefs is a real one is borne out by the facts that washerwomen in health resorts have contracted the disease through washing these handkerchiefs. Very fine drops of saliva may be a source of infection. Intimate association with coughing consumptives is dangerous to nurses in the rooms. Another important instruction is that rooms should be dusted with damp cloths, using a disinfectant solution. Government and health boards must take the question up in earnest. Without education of the public all our efforts will be in vain. Of course newspaper propaganda should be carried on. Premises occupied by consumptives and vacated should be made fit for occupation by the health board. Bacteriological examination is quite as important. Association of consumptives with other patients in public hospitals is injurious and scandalous. Consumptives should not be treated in the ordinary hospitals. There should be systematic inspection of dairies and food supplies. There is also danger of infection from domestic pets, cats, dogs, birds, etc. The germ of tuberculosis is always with us. Patients should have as much open-air exercise as it is possible to acquire. Individuals especially pre-disposed should receive special attention. If the family physician would make it his duty to watch out for badly formed chests, he could do much. Prompt attention should be paid to anemic and dyspeptic young women. Every precaution should be taken against "cold catching." The patient should not choose a sedentary occupation. Much out-door life is especially desirable. Cure is altogether a question of instruction. There should be no cough mixtures. The nearer we approach the methods of the sanitaria, the better our results will be. The only method is the open-air treatment. The patient should occupy the room when in the house, with the most sunshine. Nothing should be allowed to interfere with the fresh-air treatment. Rest in the open air will improve the digestion. Excellent results have been obtained from this treatment in the sanitaria. Cod-liver oil, where it agrees, is undoubtedly useful. The best results follow the administration of creosote—not too large doses.

Care and Prevention.—Dr. Charles Sheard spoke of the open-air treatment as the ideal treatment from the tubercular standpoint. In every case where we find the bacillus present, we have a case of tuberculosis to deal with. If several examinations at various times fail to show any evidences, I think we have not got a case of tuberculosis to deal with. This is not the only disease which fresh air benefits. Many cases of bronchitis and bronchitectasis are also benefited thereby. The sanitarium is anxious to do cures in tuberculosis. There are a great many cases with cavities in the lungs and we have to care for these cases as well. We have all seen these cases very recently put side by side in the

same ward with a patient with chronic bronchitis, with another with pleurisy, and with another case with obscure chest trouble; yet there ought to be better places for the care of these cases. There ought to be separate buildings in connection with our hospitals for those cases which the sanitaria will not admit. The profession ought to stand united for the attainment of this object. He spoke of the benefit of the open-air treatment, and thought there should be glass houses and glass sheds so as to protect them from the changes in the weather. Much can be hoped for if patients are kept constantly in the open air. As regards the danger of getting tuberculosis from animals, Dr. Sheard quoted Clifford Albutt, who fed his own family with the meat of tuberculous cattle and yet none of them contracted the disease. The tuberculin test applied to cattle is a very crucial one. In one cow which responded to the tuberculin test, tuberculosis was limited to one gland alone. Generally we agree that tuberculous milk is dangerous, according to the stage of the tuberculosis in the animal. How far are we prepared to go in enforcing laws *re* infection of this disease in animals and in man? He thinks the practitioners should report this to the health board. We must understand that we have got a vastly different disease to deal with, than the acute infectious diseases which run their course in a few weeks. How much separation from the general public are we prepared to enforce on a consumptive, or whether are we right in doing even this? It is very questionable if we are prepared to enforce segregation in these cases, and it is doubtful if the public is ready for this just now. In the meantime steps should be taken to notify hotels and lodging houses of cleansing rooms occupied by consumptives.

Dr. Beeman, Newburgh, spoke of the bacteriological work done in the laboratory, and thought that more should be done by the general practitioner. He thought he better secured the confidence of the patient by having this apparatus in his own office to give this gross diagnosis.

Dr. P. H. Bryce dealt with the establishment of sanitaria from the governmental standpoint, and quoted statistics showing the widespread prevalence of tuberculosis in this province.

Dr. McConnell, New Mexico, told of three years' experience in the far south-west. He stated that more patients were now sent out there, in whom as yet the bacillus has not been demonstrated, *i.e*, in the pre-tuberculous stage.

Dr. John Hunter said every physician should examine the chest of every one of his patients, no matter what disease he came to be treated for.

Dr. Wm. Oldright: Notification of the disease should be given in all cases. Disinfection after habitation by a consumptive should be carried out; also sleeping cars after carrying a patient to a health resort. Thought we ought to have sanitaria near the city.

Dr. Playter spoke of the use of ozonised air in the treatment.

Dr. Coventry thought la grippe was responsible for laying the foundation of many of these cases.

Dr. Price-Brown: The lungs are only part of the respiratory apparatus. Every medical man should be able to use the laryngoscope and the rhinoscope. By treating the nose and throat, you can sometimes prevent the disease, and do not forget that you may have tuberculosis without cough or expectoration.

The annual banquet of the Association was held in the evening at McConkey's restaurant, Dr. W. J. Gibson presiding. A very enjoyable evening was spent by all present.

SECOND DAY, WEDNESDAY, JUNE 14th.

Surgical Section.

Dr. Wishart, London, was elected Chairman of this Section.

Inguinal Hernia.—Dr. Wm. Oldright presented four patients, in all of whom he had performed the radical cure very recently. He quoted the indications for and against operating in these cases as set forth by Dr. W. B. Coley, in "Sajous' Annual." He thought Halsted's modification of the Bassini method was not an improvement.

Treatment of Hernia.—Dr. A. McKay, Ingersoll, estimated that something like 20 per cent. of the population is ruptured. He exhibited a new truss which he had contrived after a year's experimenting, and stated that in making trials of its efficiency he had selected men who were lifting all sorts of heavy loads, and found that it would give the greatest satisfaction. The idea of the truss is to allow of the body motion, a constant wavering of the pad over the ring.

Dr. W. J. Gibson spoke of the difficulty of supplying patients with proper trusses. Dr. McKay's truss is devised to prevent the excoriation of the skin.

A Peculiar Gynecological Case.—Dr. Harrison, Selkirk, Ont.: The subject of this case was a woman with a considerable family. Having become pregnant again—two and a half months—she was advised by a neighbor to produce an abortion, as it was a very easy thing to do, and no trouble arose other than an ordinary monthly sickness. A glass stylet penholder was passed blunt end foremost, which slipped from the woman's grasp and was lost to her touch. On examination, the doctor could find no rent or tear of any kind, either in the vaginal walls or in the walls of the uterus. Even after putting the woman under chloroform, the stylet could not be found. The woman was most positive that it was there and that it had been passed blunt end foremost. An exploratory abdominal operation was performed, and the stylet was found in the region of the spleen with the point almost

impinging upon the diaphragm where the heart lies on that muscle. The woman recovered with nothing worse than a stitch abscess.

Dr. Powell cited a similar case, where a knuckle of intestine was found protruding through a rent in the anterior wall of the uterus. The woman died, however, in this case.

Dr. Roe, Georgetown, asked if the woman had aborted.

Dr. Harrison thought so.

Dr. J. F. W. Ross spoke regarding perforations of the uterus that give rise to practically no symptoms. He instanced three cases seen recently in practice, in which, with well-marked rupture of the uterus, there were no symptoms of collapse.

Dr. E. E. King thought it was probable that the stylet in Dr. Harrison's case had never gone into the uterus at all.

Dr. Harrison thought that the pen had passed through the fornix, but he could see no rent whatever in the vaginal wall.

The Seminal Vesicles in Health and Disease.—Dr. E. E King described this condition as a pyo-salpinx masculinus. He exhibited a number of sections and specimens, and said that this was a storehouse as well as a secreting organ. He further described the normal condition and relations of the organs, and also their condition in enlarged prostate and in a previous gonorrhea. He stated he had examined during the last week, in the asylum, ten cases of chronic masturbators, and in only one of these were the vesicles found exceedingly enlarged. The prostate was only found enlarged perceptibly in one case.

Drs. Primrose and McConnell discussed the cases.

A Note on Kocher's Method of Radical Cure of Hernia—Femoral and Inguinal.—Dr. Primrose gave a very lucid blackboard description of this operation, and showed clearly how the inguinal pouches in the peritoneum were obliterated. As a guide in performing this operation, it was best to introduce a finger into the canal and cut upon the finger. Kocher recommends the silk suture in both operations.

Dr. Ferguson, London, Ont., discussed this paper.

Fibrinous Rhinitis.—Dr. D. J. Gibb Wishart stated that several cases of this had occurred last summer in his own practice. In the text-books published this year, Lennox Brown and Walsham both state that it is a disease distinct from diphtheria, and that these cases need not be isolated.

Drs. Price-Prown, L. L. Palmer and Ingersoll Olmsted discussed at some length Dr. Wishart's interesting paper.

Electrolysis in a Case of Malignant Sarcoma.—Dr. R. N. Fraser, Thamesville, Ont., reported the history of a case in connection with malignant disease. The disease was situated in the testicle.

On Some Points in the Diagnosis of Eye Affections.—Dr. R. A. Reeve read a highly interesting paper with this title, dealing with those eye affections most commonly seen by the general practitioner.

Medical Section.

Dr. J. Russell, Hamilton, was elected Chairman of this Section.

Ophthalmology and the General Profession.—Dr. G. H. Burnham read this paper, the object of which was to bring forward some of the diseases of the eye, and also some disturbances associated therewith, which required early recognition in order to be treated successfully. He instanced acute glaucoma, chronic glaucoma, tobacco poisoning, causing dimness of sight. In regard to the subsequent changes produced by an attack of iritis, he did not for these perform an iridectomy, but instead of an operation gave his combined form of treatment, viz., mercury and the iodide of potassium internally, and pilocarpine hypodermically. He said his results were in this way much better than by an operation. In regard to diseases of the tear passages, he strongly recommended early treatment. He does not favor the employment of the largest probes, and does not probe frequently; as good if not better results can be attained without the additional suffering, which frequent probing is always associated with. He also spoke of eye-strain causing so many nervous disorders, as headache, neuralgia, constipation and St. Vitus' dance, and of the great importance of having the sight tested by an oculist, and not by those so-called "doctors of refraction."

Dr. G. S. Ryerson thought that the paper fully met the requirements of the subject. Ophthalmia neonatorum was, however, omitted. A large percentage of eyes were lost from this cause. Medical men should take great care in cleansing the maternal parts before delivery and the eyes of infants later. Credé's methods greatly reduced the percentage of this disease. One or two drops of a one per cent. solution of nitrate of silver should be dropped into the eyes; this is not too strong. In regard to the question of refraction, doctors of refraction or doctors of ophthalmology were very misleading. He had tried to legislate against these when in the Legislature, and had approached the Government *re* these titles being used unlawfully. The giving of glasses by laymen to the public has been long done; but these titles are very misleading to the public. The question of refraction was a most difficult and complex one, and how can these men, on a few months' training, undertake such work and treat such cases.

Dr. R. A. Reeve said that in the preventive treatment of ophthalmia neonatorum bacteriological examination of any natural discharge is of great help. He also upheld the application of nitrate of silver or perchloride of mercury to eyes after birth. He also recommended protargol, three to four per cent., as being painless and effective. The Provincial Board of Health should give instructions to doctors and maternities that Credé's or some method be used regularly. He referred to the question of refraction and the difficulty in dealing with it.

Dr. Burnham: Only some points can be referred to in a short paper. He agreed with Dr. Ryerson and Dr. Reeve in regard to

refraction, and thought the general profession negligent in the majority of cases.

The Insanity Plea in Medical Jurisprudence.—Dr. J. Russell, Hamilton, read a carefully prepared paper on this subject. He thought the public were beginning to doubt that the law was being properly administered in these cases. The question was of interest to the general practitioner as well as to the psychologist. It became every physician to acquire such a general and even special knowledge of the subject as to be able to acquit himself creditably in the witness-box without bringing personal discredit on himself or the profession.

Dr. T. F. MacMahon upheld Dr. Russell with regard to forming a competent commission to deal with insanity cases in law.

Notes of a Case of Torticollis.—Dr. Meyers presented the case and described his treatment: Separation from the patient's friends; Swedish movements gradually increased; galvanism; internally, iodide of potash and the salicylate of soda.

Acute Diabetes.—Dr. A. F. McKenzie, Monkton, Ont., reported a very interesting case of this condition.

Treatment of Eczema.—Dr. Graham Chambers described his treatment of this disease.

Dr. Coventry upheld the internal treatment with mercuric chloride, $\frac{1}{64}$th of a grain, and calomel at times, dry, locally.

Dr. Chambers thought mercuric chloride did not agree in some cases. He gave calomel in larger doses every four days or so, and salines if needed. Calomel locally in seborrheic cases he thought had no effect. About fifty per cent. of the cases of eczema are probably parasitic.

The Present Status of Ergot in Obstetric Practice.—Dr. K. McIlwraith, Toronto, read a paper with this title. In the great majority of cases there was no indication for the use of ergot. It was positively dangerous in a large number of cases.

Dr. Roe, Georgetown: The use of ergot has changed very much in the last twenty years. He used to give it when the head was on the perineum, and he never had any bad results.

Dr. Machell: Dr. McIlwraith has put the question very fairly. He has given both sides of the question. For the first stage ergot is never given now. In post-partum hemorrhage it is of very little use. For some years now he had given no ergot at all. He thought the pressure on the fundus the best.

Dr. G. Gordon: There is a tendency to go to extremes in this matter. If all was clear in the second stage, and pains slow, he would not hesitate to give the ergot.

Drs. Hunter, C. J. O. Hastings and Cruikshank further discussed the case.

GENERAL SESSION.

A Case of Coccidial Infection.—Dr. D. W. Montgomery, Los Angeles, Cal., gave a clear description of this case. First, there

were general symptoms of the lungs simulating tuberculosis. The process went on for some little time—a few weeks, and then he got a disease of the skin which was well shown in the photos the doctor exhibited. The disease of the skin consisted of large tubercles which at first appeared as little maculæ, then grew to be small tubercles, then large tubercles. These tubercles ulcerated and were covered with crusts, and when you would grasp one and squeeze it between the fingers you could see that the inside was granular-looking, like a fig. We examined some of his sputum but there was no tubercle bacillus to be found in it. The doctor took a piece out of one of the crusts, and the first thing he struck was the small round bodies as shown under the microscope. These have a clear double contoured membrane and granular contents. Just exactly what these organisms are we do not know. Previous to this case two other cases have been reported. As far as the diagnosis of the disease is concerned, from the symptoms alone it would be rather difficult. He came to the conclusion that it could not be iodide of potash poisoning—for these tubercles looked very much like the iodide rash—because the man had not been taking iodide of potash. We exclude the mycosis fungoides from the fact that there was no preceding erythematous stage nor such lesions on the body. He here exhibited a photo showing a case of mycosis fungoides. In this you can get an idea of the eczema of the hands and arms, and the tomato-like masses were well shown. There was no history of syphilitic disease. In one of Rexford's cases the disease started in the lungs, to later break out on the integument. What we call this micro-organism we do not know. Rexford's cases were submitted to the best experts we have on these micro-organisms. We expect the disease will be fatal in this case. The disease occured in a young German of twenty-one years who came to California at three years of age.

Discussion in Surgery.

Diseases of the Kidney Amenable to Surgical Treatment.—Dr. Christian Fenger, of Chicago, read this paper. The subject was a large one, he stated at the outset. The origin of the surgery of the kidney was in 1869—thirty years ago. This new field of surgery developed rapidly, as is well seen from a review of the literature; for instance, from 1889 to 1899, what he called the third decade, no less than eight hundred papers had been published on this one subject. Within the last five years came the surgery of the ureter. It is represented in the literature for the last ten years by about ninety papers. We can divide the surgery of the kidney into two periods. The first ten years we can term the period of nephrectomy. During this term the loss of one kidney was not considered so much as a cure of the patient. This period did not terminate after this ten years; but the dawn of the second period, or the period of conservatism, commenced, instead of nephrectomy, a less radical operation to locate the disease without sacrificing the tissue of the kidney at its beginning. In 1881 Hahn made nephror-

raphy for floating kidney. But by far the most important step, and one whose consequences have been most far-reaching, covering the entire field of surgery, we owe to Henry Morris, of London, who, on February 11th, 1880, had the courage to open up the healthy kidney tissue and remove an oxalate of limestone from the healthy kidney by an incision through the renal parenchyma. No operator had had the courage to do this before, but from suppurating and distended kidneys which did not bleed when we cut through them. From Morris' important operation dates the possibility of the development of conservatism, which is pressing forward, fighting its way toward the goal of renal surgery, which is not the cure of the patient, but it is the preservation for the patient of the tissue that is valuable for secretion. Morris' operation has made it possible to save the kidney from the destroying influence of stone, to operate on the healthy kidney with a stone in it. In the third decade the latest step forward in conservatism is the surgery of the ureter. It is a somewhat limited field. With the exception of uterectomy for tuberculous infection, which is only a small part of it, the whole of the field of surgery of the ureter has for its aim absolutely nothing but conservatism of the kidney.

It is a matter of vital necessity for any one who operates on the kidneys to examine the urine for the quantity of urea before any operating is done. There is compensatory hypertrophy of a healthy kidney when its fellow has been removed or destroyed by disease. The urine must be withdrawn and collected in sterilized test tubes. Examination of the urine must be made without delay, because urine changes rapidly by decomposition. There should be a chemical examination for albumen, blood and sugar. There should be a quantitative examination of the urine. We have got to know the quantity of the urea for twenty-four hours. The life of the patient depends upon that. Dr. Fenger spoke of the use of the cystoscope as the most important step in diagnosis—the last step, the step that gives us the final answer to the question what the matter is, *i.e.*, direct examination of the kidney through an incision in the lumbar region or the peritoneal incision. The lumbar method permits of much more direct examination of the kidney than the abdominal one. The peritoneal is seldom resorted to, whilst the lumbar incision is the one in daily use. The essayist then spoke of the manner of controlling renal hemorrhage by compression either with the fingers or the clamp. If that does not stop the hemorrhage, it is sutured. Failing this, we have to pack the opening of the kidney into the pelvis and trust to the compression of the gauze. Dr. Fenger next took up the different diseases of the kidney for which we operate, and in a classical manner described each and the indications for and against operation. In concluding his very able and exhaustive paper, Dr. Fenger returned his sincerest thanks to the Association for the opportunity that had been extended to him to meet the medical gentlemen of the Province of Ontario.

Election of Officers.

President, J. E. Graham, Toronto; First Vice-President, A. H. Wright, Toronto; Second Vice-President, M. I. Beeman, Newburgh; Third Vice-President, R. J. Trimble, Queenston; Fourth Vice-President, A. F. McKenzie, Monkton; General Secretary, Harold C. Parsons, Toronto; Assistant Secretary, E. H. Stafford, Toronto; Treasurer, Geo. H. Carveth, Toronto.

Dr. William Britton presented the report of the Committee *re* Health of Public and High School Children. In connection with this report it was recommended: (1) That the number of subjects of study prescribed by the Education Department be lessened. (2) That home work be curtailed. (3) That less exacting examinations be imposed on the pupils. (4) That more time during school hours be devoted to physical culture. (5) That trustees should confer with members of the medical profession as to lighting, ventilation and capacity of school-rooms. (6) That the curriculum, generally, should be framed with full consideration of the paramount necessity for preserving the physical health of the rising generation.

The report was adopted.

Re Hospital Abuse.

Dr. W. J. Wilson read the report of the Committee appointed for this purpose:

Your Committee find on investigation as follows:

1. The general tax paid by the public for medical and surgical attendance is dwindling and the willingness of the public to be pauperized increasing.

2. This is due mainly to the mode of management of the hospitals and the operation of "The Charities and Public Health Acts" under which $110,000 is expended in a per capita rate on the hospital alone. Successive changes in the law tend towards the socializing of the profession and the curtailing of the domain of the private practitioner.

3. Particular instances of the evil are as follows: (*a*) Outpatient departments, so far as we can find out, with only one exception, are in the habit of handing the prescriptions to the patients, who carry them away and frequently hand them around among their friends. (*b*) The Emergency Hospital of Toronto is being utilized at practically no expense to the patients, for daily accidents of all kinds which, till this hospital began operations, invariably went to private practitioners. This we find to be a direct violation of our Code of Ethics, Art. 5, sec. 8.

Therefore your Committee beg leave to suggest:

1. That the Committee on Legislation be requested to present to this Association at its next meeting a review of the operation of "The Charities and Public Health Acts" and their effects upon the status and emoluments of the profession.

2. That the Committee has confidence in both the ability and the willingness of the various hospital boards to remedy the evils complained of, particularly after attention has been directed to specific instances of what your Committee humbly believe to be wrong.

3. Your Committee recommend that it be made a rule in all hospitals that no patients be entitled to free treatment whose hospital maintenance is provided for, including society patients paid for by lodges, except as an act of charity.

4. That all prescriptions in the out-door department of our hospitals and of the various dispensaries be kept on file and not taken away by the patients.

5. That emergency hospitals should simply render "first aid" and relieve the patient until his family physician or substitute arrives, when the further care of the case is handed over to him, unless it be a case which will receive a municipal order, when it will be treated by the usual hospital staff.

6. That the sending of accident cases by a wealthy corporation, and especially when there is an accident insurance carried on employees, be carefully looked into and any abuses resulting remedied.

This report was unanimously adopted.

Dr. E. J. Barrick presented the report of the Committee dealing with the consumptive poor, which was adopted.

Dr. Wm. Oldright presented the report of the Public Health Committee in regard to the treatment of inebriates, which was adopted.

The Treasurer and Secretary presented their reports.

Motion for adoption. Carried.

Dr. G. B. Smith presented the report of the Committee on Necrology: H. H. Wright, Toronto; H. P. Wright, Ottawa; J. H. Mullin, Hamilton; William Youker, Belleville, and Dr. Patullo, Toronto.

The usual *honoraria* and votes of thanks were then passed, and the meeting adjourned to meet in Toronto in June, 1900.

Women Physicians in Europe.—Germany thinks the time is not yet ripe to admit women to the universities on an equality with men, especially to the medical department, and France, although she allows them equal matriculation privileges, has refused to inscribe a woman lawyer, and the Faculty of Medicine has denied the petition of a woman physician to open a "free course" in ophthalmology. Roumania has also recently excluded women from the positions of "rural physicians" (paid by the State), and also of physicians to hospitals, except those with special pavilions for women. Berlin has, however, recently appointed women physicians for the compulsory examination of prostitutes.

THE TWELFTH ANNUAL CONVENTION OF THE INTERNATIONAL ASSOCIATION OF RAILWAY SURGEONS, RICHMOND, VA., MAY 31st, JUNE 1st AND 2nd, 1899.*

THE International Association of Railway Surgeons, one of the largest medical bodies on this continent, assembled in its twelfth annual convention in the Masonic Temple of Richmond, Va., on May 31st, and continued in session for three days. During that short time much information of value to the medical profession was disseminated, and many new ideas for the better treatment of cases exchanged. This association is perhaps the most influential of its kind in existence, and its deliberations are always fraught with much interest to the medical world. Its membership includes about twelve hundred prominent surgeons of America, including, of course, this country and Mexico. Of this number there were present at this year's meeting a goodly proportion, and under the benign influence of Dr. Bruce L. Riordan, of Toronto, who has worked every day for the past year to make the twelfth annual session a success, certainly the 1899 Convention may be termed a banner meeting. Of the social aspect of the meeting we will have more to say elsewhere in this issue of the JOURNAL; but here we will take the opportunity of remarking that the hospitality of the Richmond profession, as well as many of its most prominent citizens, was simply wonderful, not a stone being left unturned to make the visit to the South a thoroughly enjoyable one. In addition to the following report of the meeting, we hope to publish a number of the papers read, in an early issue:

It was 10.45 o'clock Wednesday morning, May 31st, when Dr. C. W. P. Brock, as Chairman of the Committee of Arrangements, called the body to order and presented Rev. Donald Guthrie, who offered prayer. Mayor Taylor was then introduced, and delivered an address of welcome. He said:

"*Gentlemen of the International Association of Railway Surgeons,*—Our coming together on this auspicious occasion betokens a lively interest in the welfare of our common humanity. No calling allotted to our mankind touches the bond of sympathy so much as the work of the railway surgeon. We leave home, friends and kindred to journey away in different parts of our land, trusting our lives to the common carrier. How much the interest in our welfare is centred in the railway service is only known to the loved ones we leave behind.

"Fortunately, our excellent railway system is so perfect as to render the risk slight, yet the time does come when, amid the crash and destruction incident to such crises, the railway service is taxed to relieve the distress, and then the ministering angel, in the

* Reported specially for THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

person of the railway surgeon, appears, with untiring efforts and suitable skill to ease our miseries.

"Your deliberations will be for the common good, and we are glad to have you as our guests. Our homes are open to you, and we will place you specially in the hands of two of your ex-presidents, our well-known townsmen and eminent physicians, Drs. Brock and Ross, and their colleagues, Drs. Hugh M. Taylor, J. A. White, and others. I welcome you as Mayor, and extend to you the freedom of the city. I hope your visit will be both pleasant and profitable to your noble profession."

Dr. J. Allison Hodges followed the Mayor, and on behalf of the medical profession of Richmond extended a welcome to the visiting surgeons. He spoke in the outset of the pride Richmond felt in entertaining distinguished guests, and especially of the pleasure the medical profession felt in entertaining the International Association of Railway Surgeons.

Dr. Hodges paid a glowing tribute to Drs. C. W. P. Brock and George Ross, both ex-presidents of the Association, and characterized them as representatives of Virginia's courtliest gentlemen. Referring to the sectional feeling of years ago, Dr. Hodges said that portion of the past had been obliterated, save that it was a holy memory clinging round the graves of our hero dead. "We give you now, whether you are from the north or the west, the hand of brotherly friendship," continued the speaker, amid great applause, "and we welcome you with pleasure."

Dr. Hodges told how Richmond had risen from her ashes in little over a quarter of a century, and detailed the many great improvements contemplated in the near future to increase the city's importance and attractiveness. He concluded by reiterating his words of welcome.

General Manager George W. Stevens, of the Chesapeake and Ohio, was next presented, and in brief but pointed manner tendered the courtesies of the Chesapeake and Ohio to the Association, telling them that no demand they could make on the road would be "turned down."

Dr. Riordan, the President of the Association, ascended to the platform when Mr. Stevens took his seat, and, taking the gavel from Dr. Brock, expressed his thanks and the thanks of the Association for the words of welcome spoken by Mr. Taylor and Dr. Hodges.

Dr. James G. Hunt, of Utica, N.Y., Vice-President of the Association, was then called by the President to the chair, and Dr. Riordan read his annual address, and, on motion, it was referred to a committee of three, consisting of Dr. F. J. Lutz, of St. Louis; Dr. Thorn, of Toledo, and Dr. Middleton, of Davenport, Ia.

In his address, Dr. Riordan, after referring to the proverbial hospitality of the South, said:

"We are all proud of the work which has been done in the past thirteen years by this Association of Railway Surgeons; first

under the old title of National Association of Railway Surgeons, and later under the present broader title of International Association of Railway Surgeons. We are proud of our official organ and bi-weekly journal, the *Railway Surgeon*. It is pre-eminently the best medical journal relating to traumatic surgery which is at present published, and is an important educator, not only to those who attend, but also to those who have not the opportunity of attending our annual gatherings.

"The papers presented at our yearly meetings have been generally of a practical character and of high scientific attainment; but I think we have been to some extent duplicating the work of other medical and surgical associations at present existing, while we might be paying more attention to subjects which are especial y the domain of the railway surgeon.

"To those entrusted with the official responsibility of carrying on this work the watchword must ever be 'Excelsior.' Occupying, as I do at this time, the honorable and responsible position of president, I believe it to be my duty to direct the members of this association to pay more particular attention to matters which are the special field of the railway surgeon. I do not mean to the exclusion of matters of scientific interest, which are common to us all as surgeons and physicians, but that we should take up and discuss questions with which we are particularly qualified to deal from our connection with railway work, discussions which will elicit much valuable information, alike helpful to railway managers and useful to the large number of persons who earn their living in the various branches of the railway service; also, instructive and interesting to ourselves as railway surgeons.

"The first subject which I would direct your attention to is a field in which little work has been done as yet on this side of the Atlantic—a field where the railway surgeon will be doing a great and unselfish work for the benefit of humanity—I refer to the instruction of railway employees in the principles of rendering first aid to those injured or suffering from other emergencies. It has been said, and truly so, that the fate of the injured person is in the hands of the surgeon who applies the first dressing. The fate of the injured is indeed a sad one if the first dressing to his wounds is done in the absence of skilled surgical assistance by a person ignorant of the first principles of rendering first aid.

"It is our duty, having the knowledge and the opportunity, to take up this work. It is our duty to our fellow-beings generally, and more particularly to those railway employees for whose physical well-being we should feel ourselves in some measure responsible.

"Saving of life and suffering would result from the diffusion of first aid information among railway employees, and a saving in money would accrue to the railway companies by reason of the lessening of the number of infected wounds following railway accidents; also, a lessening in the number of deaths now due to



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preventable causes, such as hemorrhage, asphyxiation, and septicemia, or blood-poisoning.

"To direct your attention to another subject needing special attention, I would say that the railway surgeon has a special duty and responsibility in regard to public health, as well as a duty to the railway and transportation companies of the country. The arbitrary and ill-advised action of some persons who are responsible for the carrying out of the provisions of the different public health Acts now entails great inconvenience to the public and enormous financial loss to transportation companies.

"The railway surgeon can wield his influence to prevent this needless interference with commerce, and at the same time see that public health is safeguarded. With many of our members acting on State and other boards of health, we should endeavor to mould public sentiment and legislation so that there would be the least possible interference with free movements of individuals and commodities.

"I was astonished to see during some of my travels a little time ago that the citizens of some of the towns we passed through had considered it necessary to establish what was new to me, namely, a shotgun quarantine against neighboring towns. Such a state of affairs as this is a disgrace, not so much to the ignorant public, but to those among the medical profession who should exert sufficient influence in the community to render such a condition of affairs impossible, by instructing and moulding public opinion. (Applause.)

"I am pleased to say that the subject of sanitation of cars and station buildings has received considerable attention in the past by members of this association, but present conditions still demand our continued efforts.

"Another field for the railway surgeon: I believe a standard system of relief for employees injured while in discharge of their duties is a much-needed reform; as much so as was the adoption of a standard gauge for the road-bed or a standard coupling on the cars. The two last reforms were only secured after years of effort by associations interested in these branches of railway work, and so it will probably take time and persistent effort to accomplish a standard system of relief; not that it is not urgently needed, but reliable information will have to be gathered from many sources before a satisfactory system will be evolved. From the multiplicity of systems of relief now in use, we are sure a standard system can be constructed; a system that will be acceptable and satisfactory both to the railway employees and the managements and owners of railway companies. There may be such a perfect system in existence at present, but if there is, it will be discovered by a committee appointed to do this work from this association.

"From personal observation and reading, I find that there is a very considerable objection manifested on the part of the employees to any of the systems of relief with which I am acquainted, and,

on the other hand, I believe that the railway corporations, at the same time, are expending a large amount of money, which is being wasted, in so far as it is not bringing value to them in the way of lessening claims for personal damage brought against them through courts and lawyers.

"I believe I am within the mark when I make the statement 'that not more than one dollar in five paid out of the coffers of the railway companies reaches the pockets of the injured employee or his family.' The amount paid for surgical attendance would be represented by a mere fraction. In fact, it is the middlemen who are getting most of the money. That is unsatisfactory and unjust, both to the employee and the railway corporation. We want a system that will get rid of the ambulance-chasing lawyer, who is a useless parasite; like other noxious germs, he cannot thrive in the light.

"While no doubt there is a marked difference of opinion as to the lines on which a remedy can be found, any discussion which is calculated to throw light on the question will be of great value, and a report of the proceedings of such a commission as I suggest will be watched for with interest by both railway managers and railway employees. If a system can be found which would be acceptable to the railway employees and the railway corporations (including, might I suggest, arbitration in disputed cases), we would be assisting to free the managements from the enormous cost of litigation and the losses of money which now result to the honest employee who has suffered personal injury while in discharge of his duties."

Other Officers Report.

The Treasurer, Dr. Eugene R. Lewis, of Kansas City, submitted his report, in which he paid a high tribute to General Manager Stevens, of the Chesapeake and Ohio, and to the General Manager of the Grand Trunk of Canada, who, he said, had done more for the organization of railway surgeons than any other railway officials, and both had risen to official positions through the ranks of employees of the Wabash. He therefore humorously suggested that "On the Banks of the Wabash" be adopted as the song of the Association. He submitted figures setting forth the financial condition of the organization, and his report, together with a short report rendered by Secretary Lewis J. Mitchell, of Chicago, was referred to the Executive Board.

Dr. Brock, at this juncture, formally extended the invitation of the Chesapeake and Ohio to the surgeons to visit the University of Virginia and the Hot Springs, and acceptances were received forthwith from 130.

Dr. Ross entered the room as Dr. Brock concluded, and was called upon for a speech. He, however, confined himself to reiterating and emphasizing the announcements made by Dr. Brock. A recess was then taken until two o'clock.



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AFTERNOON SESSION.

The afternoon session was not a very busy one.

The following gentlemen were appointed by the President to constitute the Nominating Committee: Drs. F. J. Lutz, of St. Louis; H. L. Getz, of Iowa; J. A. Hutchinson, of Montreal, Canada; J. B. Hungate, of Weeping Water, Neb.; G. C. Stockmar, of Iowa; H. M. Taylor, and C. W. P. Brock, of Richmond.

The various papers were then taken up, and Mr. Edgar J. Rich, Attorney of the Boston and Maine Railroad, of Boston, read a highly interesting treatise on "The Claim Department of Our Eastern Railroads and Its Relations to Medical Organizations." The paper was exhaustive and comprehensive, and was given the closest attention. It was discussed at length, the discussion showing that the warmest and most friendly feeling existed between the doctors and the lawyers.

Dr. J. A. White, of Richmond, read a paper on "Burns and Scalds of the Eye," and was followed by Dr. Thomas A. Manley, of New York, who read a paper on "The Role of Primary and Secondary Osteo-Plastic Surgical Procedure in the Treatment of Compound Fracture of the Extremities." Both papers were freely discussed and much useful information was exchanged.

Reception at Night.

The Association adjourned at 5.50 o'clock, and after dinner at the "Jefferson" a reception was tendered the visitors, followed by a musicale given by negro talent exclusively. The darkies occupied a position in the gallery overlooking the Main-street court, and there for several hours they discoursed plantation melodies, interspersed by rag-time songs, which greatly amused the physicians and their families.

The Jefferson Hotel was the headquarters of the delegates. To find in the heart of a quaint Southern city a hotel so large, and with the bustle of New York and the lavish decoration of Chicago, was a genuine surprise. The first element a hotel should possess is the one of utility to meet the demand of the itinerant strangers within the city's gates. In this respect the Jefferson excels. It lodges, feeds and bathes the weary stranger to his utmost satisfaction. It appeals to the eye of the great mass of the people by its profusion of ornate decoration. It appeals also to the wealthy stray "bull or bear" by its fine rotunda, where he may sit in the gallery and dream, as he looks at the animated scene below, that "sugar is up, or oil is down." Passing from this busy part to the cosy and numerous reception rooms, and then across a magnificent marble hall to the grand Louis XVI. drawing-room, refinement is expressed in decoration and detail, but the library, perhaps, appeals universally with its subdued and elegant color scheme and fittings—a perfect gem of a room. The palm garden

refreshes the eye, and the dainty confections served there please the palate. The Jefferson takes a foremost place in the circle of luxurious hotels that are now the byword of the travelling public in America. We reproduce a fine view of the exterior on page 53.

A large number of the local physicians called at the hotel, and assisted in entertaining the visitors.

SECOND DAY.

The morning session of the second day was opened by President Riordan shortly after 9.30 o'clock.

The entire morning was taken up with the reading and discussion of papers on surgical questions.

The attendance was large, notwithstanding the prevailing heat, and intense interest was manifested in the proceedings.

The principal discussion taken up that morning was the Symposium on Burns, in connection with which the following papers were read and discussed: "Pathology," by Dr. J. Alexander Hutchinson, of Montreal, Can. "Complications and Sequelæ," by Dr. F. J. Lutz, of St. Louis, Mo. "Primary Treatment," by Dr. Herbert Bruce, of Toronto, Can. "Railroad Surgeons, in their Relations to the Legal Department," by Hon. B. B. Munford, attorney of the Southern Railway, of this city.

Mr. Munford handled his subject in an able manner, and was repeatedly applauded. In conclusion he said:

"We live in an age of great corporations. Their existence is a result of the confessed inability of small capital and isolated effort to accomplish that which can be accomplished by aggregated capital and united effort. Especially with railway corporations, where the rapid transportation of passengers, freight, express and mail, without transfer or delay, is an imperative demand of the public, we may look for consolidations, and the merging into a few trunk systems of the detached railway lines of the country. The consequent advantages to the public of such consolidations are manifest, though there are corresponding and related dangers which should not be overlooked and forgotten.

"One of these is that the administration of the affairs of such gigantic corporations rests upon separate departments, with no sense of common responsibility, and with no thought of united obligation to the public interests which the corporations stand pledged to subserve. The sense of personal responsibility with officials and employees for the methods and policies of the company as a whole, is not always recognized. To counteract this, one among the growing dangers springing from great corporations, I would cultivate an *esprit de corps* among all the officials and employees of the company—a feeling that every happening or question affecting its efficient administration—its obligations to the public, and its honorable and high-minded dealings with those with whom it



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comes in contact—is a matter of personal concern to all who participate in its management. I would insist that the obligation of every official and employee was not discharged until by precept and example they had lived up to this high standard, and secured from the company what under its charter, and the consensus of an enlightened public opinion, was the full measure of its responsibility.

"To the railway surgeons of the country we may, I am sure, look for contributions of sympathy and effort in furthering this sentiment. Their record in the past and their present attitude of eager willingness to improve every opportunity which advancing science affords, is an assurance that not only will their professional duties be discharged with increasing skill and fidelity, but they will be found in earnest sympathy and co-operation in promoting all that effects the honor and efficiency of railway companies, and the welfare of the public to which they minister."

At the conclusion of Mr. Munford's address he was tendered a vote of thanks, and was requested to present his manuscript for publication in the records of the Association.

The convention then took a recess for lunch until 2 p.m.

When the surgeons convened for the afternoon session the first paper read was by Dr. Lester Keller, of Ironton, Ohio, on "Professional Examination for Railroad Surgeons." It was an interesting essay, which brought out some instructive discussion.

The next two papers which treated on almost the same subject, were jointly discussed after they had been read by their authors. They were "Progress of Hygiene and Sanitation," by Dr. G. P. Conn, of Concord, N.H., and "Railroad Hygiene," by Dr. H. C. Fairbrother, of East St. Louis, Ill.

Dr. Fairbrother in his address said, in part:

"The management of contagious and infectious diseases, whether occurring in districts passed through by railroads or developing on board of trains, has always been a subject fraught with great concern to railway companies. Many companies have been brought near the brink of financial wreck by the repeated and disastrous quarantines laid upon them on account of outbreaks of these diseases. In some instances the entire populace seem to be mad with fright. Laws are passed beyond all reason. Trains coming from infected districts are treated as harbingers of death. Passengers have been removed from such trains and corralled in tents for many days with insufficient food or drink. In other instances doors have been left locked and passengers compelled to remain within these often crowded and filthy and poorly ventilated coaches resembling very much the classical 'Black Hole of Calcutta.'

"In close connection with the carrying of infected and immigrant passengers is that of the fumigation and cleaning of cars. The work of car fumigation is of recent origin, and has not yet attained satisfactory success. There is no uniformity in the work, either as to when it shall be done, or the matter of doing it. The companies endeavor to follow the directions of the different health

officers in the different cities and states. When a case of infectious disease has been discovered upon a coach, it is the general rule of all companies to subject the car to some kind of fumigation.

"The shipment of dead bodies is another matter worthy of discussion in this connection. Of recent years there have been adopted in all the States, upon recommendations of their health boards, laws forbidding the shipment of the bodies of persons who have died of infectious or contagious diseases, and allowing the shipment of the remains of those who have not died of such diseases, only under careful restrictions as to disinfection and the placing in hermetically sealed metallic coffins enclosed in extra strong boxes.

"Practical Conclusion: Some limit should be placed upon health officers and boards with reference to declaring quarantine and otherwise interfering with the traffic of railroads. There should be opportunity for appeal. The entire business of a railroad should not be blockaded by the quarantine of a village. The railroads are willing to join with the health authorities in preventing the spread of diseases, but they are entitled to representation as to the manner of doing it. State and national boards of health should be courts of appeal before quarantine is declared and the business of the country is obstructed.

"The water used for drinking purposes on trains should be as pure as can be obtained. River water should invariably be filtered. This may readily be done by placing a filter ball on the nozzle of the hose used in filling the coolers. But the only perfect means for the purification of water is by distillation, and this can now be accomplished at such trifling expense that distilled water should be used on every train.'

Among those who participated in the discussion of the two last named papers was Dr. C. W. P. Brock, who called attention to the sanitary precautions that have been taken for some time past by the Chesapeake and Ohio Railway Company to prevent the introduction by the means of their trains of smallpox into the city of Richmond.

At 4.15 o'clock, on motion of Dr. Brock, the convention adjourned to enable the members to take the cars to the wharf to go on the trip down the James River.

Shortly before 5 o'clock the *Pocohontas* left the wharf of the Virginia Navigation Company with a jolly crowd of excursionists. There were four hundred on board, just the four hundred Ward McAllister has so often spoken of. About a third of them were resident physicians and members of the Young Men's Business Association, while the others were visiting surgeons and their ladies. The trip was extended down to Dutch Gap and back, and the guests were greatly pleased with the attractive scenery that loomed up from time to time on either shore.

Mr. Henry Lee Valentine, the president, and a committee from the Young Men's Business Association looked constantly after the comfort of their guests, and a band of music together with the



CITY HALL AND WASHINGTON MONUMENT, RICHMOND, VA.

stationary orchestrum of the vessel attended to the musical entertainment of the party on board.

As soon as the boat turned for the return trip, the excursionists were invited to lunch and a splendid collation was served which was prepared by Caterer White, of the Westmoreland Club. The affair was a complete success in every respect, and the guests expressed themselves as highly pleased with their sojourn in the capital of the Old Dominion.

On Friday there were two more business sessions of the Association. The first began in the morning at 9.30 o'clock and the final adjournment took place during the afternoon session. At this session the officers of the Association for the ensuing year were elected and the place decided upon where the Association is to meet next year.

THIRD DAY.

The International Association of Railway Surgeons concluded its twelfth annual meeting Friday, shortly after noon, and many of the surgeons departed for their homes, though the great body of them left at 8 o'clock on a special train for the Hot Springs, as guests of the Chesapeake and Ohio Railway Company.

The session in this city was very harmonious, and though no great amount of business was transacted, much was accomplished for the good of the profession in the general interchange of ideas. A great many highly intellectual papers treating of scientific subjects were read and fully discussed, and the matter of preventing the spread of contagious diseases was given especial attention.

Pleased with Richmond.

During their stay in this city the surgeons were shown many courtesies by the citizens generally, and in so far as it was practicable to entertain so large a body without interfering with its deliberations, they were entertained. The surgeons, themselves, were delighted with Richmond, and many of them expressed the hope that not many years would elapse before they would return here in annual session.

In order that our readers may have an opportunity of seeing a few of the beauty spots of the capital of the State of Virginia, we publish for their delectation six views of that city. We only regret that owing to our space being so crowded we have not room for more, Richmond being truly worthy of that small honor.

The Association met Friday morning, promptly at 9 o'clock, and for four hours the members were actively engaged in the business before them. It was found impracticable to have read all the papers which had been prepared. The only paper read was by Dr. Charles R. Dickson, of Toronto, on "Instruction of Railway Employees in First Aid." This paper treated entirely of the neces-

sity for educating the men to care for one another when injured, until physicians could be reached. It was shown that by unskilled handling many simple fractures had been compounded ere the surgeon could reach the injured man, and that frequently by the use of septic bandages by the ignorant, poison was introduced in a wound. These points were elaborated on in the discussion which followed the paper.

At this juncture of the proceedings, Dr. Frank J. Lutz, Chairman of the Nominating Committee, reported the following names as nominees for the various official positions:

Dr. Alfred I. Boufflleur, of Chicago, Ill, President.

Dr. Thomas A. Manley, of New York; Dr. N. P. Shinkel, of



THE JEFFERSON HOTEL, RICHMOND, VA.

Mississippi; Dr. N. J. Pettijohn, of Maryland; Dr. H. P. Merrill, of Maine; Dr. W. L. Hoy, of Ohio; Dr. F. P. Drake, of Canada; Dr. N. C. Moore, of Iowa, Vice-Presidents.

Dr. Louis J. Mitchell, of Chicago, Ill., re-elected Secretary.

Dr. Eugene R. Lewis, of Kansas City, Mo., re-elected Treasurer.

Members of the Executive Board: Dr. C. W. P. Brock, of Richmond, Va.; Dr. W. D. Middleton, of Davenport, Ia.

Honorary Members: J. M. Schoonmaker, Vice-President and General Manager Pittsburg and Lake Erie Railroad; Charles B. Price, General Superintendent Alleghany Valley Railroad; Edgar J. Rich, of Boston; B. B. Munford, of Richmond; W. G. Collins, General Manager Chicago, Minneapolis and St. Paul Railroad; E.

P. Broughton, General Superintendent C. and D. I. Railroad; Robert Blickenderfer, Wheeling and Lake Erie Railroad; C. L. Russell, President and General Counsel Mobile and Ohio Railroad.

The ticket nominated by the committee was unanimously elected, and as soon as the vote had been taken the retiring President, Dr. Bruce L. Riordan, of Toronto, turned the gavel over to Dr. Bouffleur, his successor, who was greeted with generous applause.

A vote of thanks was tendered the Young Men's Business Association for the splendid entertainment given the Railway Surgeons



General Robt. E. Lee Monument, Richmond, Va.

the previous evening, and a vote of thanks was also extended to the citizens of Richmond generally for the manner in which they have received the delegates to the convention.

The question of selecting the place where the Association is to meet next year was left to the Executive Board, and after this was decided upon the convention adjourned *sine die.*

The New President.

Dr. Alfred I. Bouffleur, of Chicago, had the unprecedented distinction of having been unanimously elected President, the members

rising to their feet when his nomination was made and cheering vociferously. Dr. Bouffleur is the youngest surgeon who has attained this distinction. He was one of the organizers, and has been active in the promotion of the objects of the Association, and his unanimous election was a merited tribute to his energy and interest in the organization, as well as to his great ability as a surgeon.

He graduated with distinction in the college of his State, took the medical course in the University of Heidelberg, and has had large experience in hospital practice both in this country and in Europe. He is chief surgeon of the Chicago, Milwaukee and St. Paul, and also of the Panhandle Railroad, and Assistant Professor of Surgery in the Rush University, Chicago.

The Confederate Memorial Literary Society gave an extremely pleasant reception one evening, from 8 to 10 o'clock, at the Museum, in honor of the visiting surgeons.

SECOND QUARTERLY MEETING OF THE PROVINCIAL BOARD OF HEALTH, 1899.

THE second quarterly meeting of the Provincial Board of Health commenced at 10.30 a.m., June 1st, at the Parliament Buildings, with Drs. Macdonald (Chairman), Vaux, Cassidy and Bryce in attendance. At the afternoon session Dr. James Henry McCullough, a newly-appointed member of the Board, was also present. After the reading of the minutes and correspondence, Dr. Hodgetts presented a report upon the smallpox outbreak that occurred in Eastern Ontario recently. The epidemic, he said, had caused a good fright, and led to general vaccination.

Dr. Bryce read a report on the results of recent observations at the Muskoka health resorts. His conclusions are that nowhere in the Muskoka district is there any danger from the water supplies; great care is being shown in the treatment of household refuse, so as to prevent effluvium nuisances, and even the smallest resorts are making remarkable progress in modern methods of sewage disposal.

In view of the reappearance of hydrophobia in the counties of Lambton, Victoria and Norfolk, it was decided to interview the Provincial Secretary, with a view to putting in force, by order-in-Council, regulations for the prevention of rabies. These regulations provide for the destruction of animals known to be suffering from hydrophobia, the isolation of suspected animals, the muzzling of dogs, and the treatment of persons at the Pasteur Institute who have been bitten by rabid dogs.

Further correspondence from St. Catharines and Welland was read, protesting against the permission given by the Federal authorities to allow the drainage from the swamps of Humberstone

to flow into the Welland Canal, in view of the latter being the source of water supply for the two towns mentioned, and also Merritton. Bearing in mind that repeated analyses of water, taken from below where the drainage enters the canal, had failed to show pollution, the Board decided that there was no ground for interference.

Dr. Cassidy read a report on the subject of medical inspection in the schools, which resulted in the adoption of the following resolution: "That the Provincial Board of Health, having heard the report of the Committee on School Hygiene, expresses the opinion that the systematic medical inspection of the schools of Ontario is essential in the interest of public health."

The Board reassembled at 10.30 a.m., June 2nd. Dr. Bryce referred to a by-law which is now engaging the attention of the municipal authorities of Gravenhurst, and which, if adopted, will put into operation regulations which are in force nowhere else in Canada. The by-law proposes to license all boarding-houses in the town, and to issue permits to those places which accommodate consumptive patients only. The houses of the latter class are to be approved of by the local board of health, and are to be subject to inspection at regular periods. The by-law also provides for the notification of cases of tuberculosis to the health authorities, and prohibits expectoration in public places. A demand for some such provisions as the foregoing has arisen in consequence of the increasing number of consumptives who yearly resort to Gravenhurst for the benefit of their health.

Correspondence was read complaining that the drainage from the Sarnia Oil Refinery was rendering the water of the St. Clair River unfit for drinking purposes. The matter was referred to the Committee on Water Supplies.

An account was presented from the municipality of Colchester for costs amounting to $421 in connection with the smallpox case there. Dr. Bryce will interview the Provincial Secretary in connection with the claim.

The source of the water supply of Stayner, which is from springs outside the village, was approved of, the water having been shown by analyses to be of excellent quality.

An account for expenses incurred by the Sudbury Hospital in connection with the treatment of certain shantymen who were suffering from diphtheria, will be laid before the Provincial Secretary.

Mr. J. J. Mackenzie read a report detailing the results of the examination of specimens in connection with diphtheria, typhoid fever and cerebro-spinal meningitis.

Plans for the improvement of the sewage system of Stratford were submitted by Mr. Vanbuskirk, City Engineer, and were approved of.

The Board concluded its business about 4.30 p.m., and then adjourned to meet early in the fall.

The Canadian Journal of Medicine and Surgery

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Oral Surgery—E. H. ADAMS, M.D., D.D.S., Toronto.

Surgical Pathology—T. H. MANLEY, M.D., New York, Visiting Surgeon to Harlem Hospital, Professor of Surgery, New York School of Clinical Medicine, New York, etc., etc.

Medicine—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; and W. J. WILSON, M.D., Toronto, Physician Toronto Western Hospital.

Clinical Medicine—ALEXANDER MCPHEDRAN, M.D., Professor of Medicine and Clinical Medicine Toronto University; Physician Toronto General Hospital, St. Michael's Hospital, and Victoria Hospital for Sick Children.

Gynæcology and Obstetrics—GEO. T. MCKEOUGH, M.D., M.R.C.S. Eng., Chatham, Ont.; and J. H. LOWE, M.D., Toronto.

Medical Jurisprudence and Toxicology—N. A. POWELL M.D., Toronto, and W. A. YOUNG, M.D., L.R.C.P. Lond., Toronto.

Mental Diseases—EZRA H. STAFFORD, M.D., Toronto, Resident Physician Toronto Asylum for the Insane.

Public Health and Hygiene—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon Toronto General Hospital; and E. H. ADAMS, M.D., Toronto.

Pharmacology and Therapeutics—A. J. HARRINGTON, M.D., M.R.C.S.Eng., Toronto.

Physiology—A. B. EADIE, M.D., Toronto, Professor of Physiology Woman's Medical College, Toronto.

Pediatrics—AUGUSTA STOWE GULLEN, M.D., Toronto, Professor of Diseases of Children Woman's Medical College, Toronto.

Pathology—W. H. PEPLER, M.D., C.M., Trinity University; Pathologist Hospital for Sick Children, Toronto; Demonstrator of Pathology Trinity Medical College; Physician to Outdoor Department Toronto General Hospital; Surgeon Canadian Pacific R.R., Toronto; and J. J. MACKENZIE, B.A., M.B., Bacteriologist to Ontario Provincial Board of Health.

Laryngology and Rhinology—J. D. THORBURN, M.D., Toronto, Laryngologist and Rhinologist Toronto General Hospital.

Ophthalmology and Otology—J. M. MACCALLUM, M.D., Toronto, Assistant Physician Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

VOL. VI. TORONTO, JULY, 1899. NO. 1.

Editorials.

SOME OBSERVATIONS ON INFECTIOUS DISEASES IN TORONTO SCHOOLS.

THE annual report of the Board of Health of Toronto for 1898 contains, among other information, an article on infectious diseases in city schools, the period included being from the autumn opening in 1894 to the summer closing in 1898. The diseases are typhoid fever, scarlet fever and diphtheria. Although the information obtained is of a preliminary character and more for

the purpose of collecting and classifying evidence for future study than for any exercise of judgment, yet, in the reporter's opinion, some conclusions may be drawn from a few of the data.

He proceeds on the theory that some physical conditions in a school, such as a method of heating and ventilating, or the system of closets in use, exert an influence in producing a large percentage of the diseases mentioned above, which, for the purpose of the statistics, are grouped as "infectious diseases." In this article we shall, however, take them up separately. Typhoid fever is generally recognized as a water-borne disease, and water, drawn from the tap of the most insanitary school in Toronto, is not more likely to cause that disease in a pupil who drinks it than water taken from the tap at home. Typhoid fever must, therefore, be omitted from the statistics, for, even if it should occur in a pupil, the cause of its attack cannot be justly referred to any condition specially pertaining to a Public school.

Admitting, for the sake of argument only, that all the conditions in the schools, which form the subject of the inquiry, should prove to be defective, could any one of them or all of them together, produce a case of scarlet fever? Certainly not. Fox says: "Scarlet fever spreads like wild-fire in very hot weather in agricultural villages, during the times when children congregate together, as, for example, during hay-making, pea-picking, gleaning, hop-picking and school fêtes, and this highly infectious disease spreads in towns and cities in very cold weather amongst the poor, who, with their scanty supplies of fuel, huddle together for mutual warmth, diligently closing every chink whereby fresh air might enter their overcrowded dwellings." The factors essential to the development of scarlet fever are: a person not immune to that disease and his contact with the body or body secretions of a scarlet fever patient or objects, which have been in contact with him. If these conditions exist scarlet fever will be developed, for the contagion is particularly active. It appears that the seasonal curve for scarlet fever in Toronto differs from the English one, in that there are here two maxima in each year, one in March, and a second in November, instead of one maximum in October, as in England. That meteorological causes, viz., temperature, humidity and air pressure, account for these maxima in Toronto has not yet been shown. It would be advisable, in the interest of medical science, to study such causes, so as to learn if they exercise an essential influence in spreading scarlet fever, or are coincidences, the real causes being

operative merely through their assistance. There can be no doubt, however, that, just insomuch as susceptible children are brought into contact, in the primary classes, with other children who come from infected homes, so will scarlet fever spread. So much for simple school influence. And it must not be forgotten that, as the relative percentage of Public schools warmed by the Smead-Dowd system, in Toronto, is large—73 per cent.—and the number of pupils attending them great—75 per cent.—so, also, the percentage of possible centres of contagion in the homes of pupils attending these schools will be correspondingly high. This last argument applies equally to the spread of diphtheria. No one knows better than the bacteriologist of the Board of Health that the Klebs-Loeffler bacillus is the efficient cause of that disease. If the specific germ is not introduced into the mouth or nostrils of a pupil, there will be no evolution of diphtheria, and that disease cannot be traced to any condition such as heating, ventilating or disposal of excreta. It is a personal contagion, carried from an infected to a healthy person by the infected person or those who come into contact with him or his surroundings, such as playmates, nurses and doctors. If the mouths and nostrils of pupil and teacher do not already contain Klebs-Loeffler bacilli, they will not derive them through the system of warming and ventilation used in a public school, especially if rebreathed air is removed from the class-room, as is the case in schools where the Smead-Dowd system of ventilation is in operation.

A remarkable fact elicited by this inquiry is that the contagious disease percentages of Public schools are higher than those of Separate schools, the averages for all closets being 6.10 for the former and 2.35 for the latter.

If a certain kind of closet, let us say the Smead-Dowd conservancy system, is responsible for these untoward results in the Public schools, then why does it not produce similar results in Separate schools in which it has been used for many years? If it were an adjuvant cause in the evolution of enteric fever, scarlet fever or diphtheria, an almost inconceivable amount of systemic resistance to these contagia would have to be present in the children of the Separate schools, in order to enable them to resist the operation of that cause. The possession of any special power of resistance to the diseases in question by the children of the Separate schools, has not been shown and very probably cannot be shown. It is unreasonable to accuse the Smead-Dowd conservancy system of

causing contagious diseases in Public schools and at the same time acknowledge that Separate schools, in which this system has been in operation for several years, are blessed with a very low contagious disease rate.

The following quotations illustrate these points:

PUBLIC SCHOOLS IN WHICH THERE ARE DRY (CONSERVANCY) CLOSETS WITH SMEAD-DOWD VENTILATION. *(In Schools marked by an asterisk part of the closets are operated by water.)*

	Average attend-ance.	Cases contagious disease.	Average contagious disease.
Brant	350	23	6.5
Church	554	44	7.9
Cottingham	266	34	12.7
Crawford	341	26	7.6
Dovercourt	384	16	4.1
George	337	21	6.2
*Hamilton	362	30	8.3
Huron	598	89	14.8
Leslie	285	21	7.4
McCaul	530	45	8.4
Perth	176	5	2.8
*Phœbe	583	25	4.2
Sackville	332	14	4.2
	5,098	393	7.31

SEPARATE SCHOOLS WITH CLOSETS OF A MIXED CLASS, MOSTLY SMEAD-DOWD VENTILATION.

	Average attend-ance.	Cases contagious disease.	Average contagious disease.
St. John's (Smead-Dowd)	87	..	..
St. Helen's (partly S.D)	296	5	1.6
St. Mary's "	557	24	4.3
	940	29	3.08

That the Smead-Dowd system of dry closets cannot be accused of causing this unfavorable condition of affairs in the Public schools will appear by comparing Shirley St. Public school, in which there are inside water-closets with separate ventilation and a percentage from contagious diseases of 3.7, with St. Helen's Separate school, situated in the same neighborhood, which has a partly Smead-Dowd system of ventilation, with dry closets used by two schools, and some privies, but which shows a percentage from

contagious diseases of 1.6. Then St. John's Separate school, which has a Smead-Dowd flushing water closet system, has a percentage from contagious diseases of nil.

To show that outside closets do not improve the health of pupils in the Public schools, compare Elizabeth St. Public school, with outside closets and a percentage from contagious diseases of 16.3, with St. Patrick's Separate school, in the same neighborhood, which has water closets with separate ventilation and a percentage from contagious diseases of 4.0.

While the statistical tables relating to the comparative number of cases of infectious disease in the Public and Separate schools will be read with a certain amount of interest, the conviction will grow on the medical reader that they are only of a preliminary character and that the heating, ventilation, and disposal of excreta in Toronto Public schools have not been proved to bear any relation to the evolution and spread of the infectious diseases, which form the subject of this inquiry. J. J. C.

NOVELTIES IN THE TREATMENT OF PUERPERAL SEPTICEMIA.

THE treatment of puerperal septicemia was discussed last April by the Obstetrical Society of France, and, excepting the Denise multivalent serum and Dr. Fochier's fixation abscess method, nothing new was advanced.

Dr. Charles, of Louvain, was not enthusiastic about the treatment of puerperal septicemia with Marmorek's serum, and gave reasons which are now universally recognized as valid, viz., that the streptococcus is not the sole pathogenic agent in this disease, and, on the other hand, there are many different kinds of streptococci. He stated that Dr. Denise, of Louvain, had discovered fifteen different kinds of streptococci, any one of which might cause puerperal septicemia. To remedy this difficulty Dr. Denise had prepared an anti-streptococcus serum (the multivalent), composed of different varieties of streptococci. Unlike Marmorek's serum, it is used in large doses. Dr. Charles stated that, in one case, he had used the Denise serum unsuccessfully; but Dr. Hubert, of Louvain, had reported to the Brussels Academy of Medicine five cases in which cures had been effected by this serum.

It also appears from Dr. Macé's address, that serum treatment

for puerperal septicemia has been abandoned in France, as the results given by Marmorek's serum are defective, and the Pasteur Institute, where this serum was first made, recognizes that it has been furnished under conditions which are unsatisfactory from a rational standpoint.

A special treatment, recommended by Dr. Fochier, of Lyons, consists in producing abscesses in the cellular tissue by the hypodermic injection of spirits of turpentine. He had seen favorable results from it in several cases. In one case, he had tried to produce suppuration in three different parts of the patient's body and failed; the heart's action was very weak and the pulse could not be counted. Full baths of a temperature of 80° Fahr. were used; the patient urinated freely, her pulse improved and the abscesses began to suppurate, but in an order the reverse of that in which they had been produced. In this last case, the cure appears to have been due to the baths, rather than the fixation abscesses. It may be added, that all the speakers eulogized the full bath in puerperal septicemia, though for different reasons. For instance, Dr. Macé classed it as a refrigerating agent; but Dr. Charles and Dr. Fochier considered that, in addition to its refrigerating power, the bath exercises a stimulating influence on the heart, the nervous system and the kidneys, thereby placing the diseased organism in position to more successfully resist microbe invasion. Dr. Macé thought that phlegmatia dolens, peritonitis and secondary myocarditis were contra-indications to the full bath. An accoucheur who would undertake to treat any of these debilitating and painful diseases with full baths, would indeed be courageous. But little was said in favor of quinine or Munde's favorite, antipyrine, as antithermic medicines. Dr. Charles, however, struck the keynote to the successful treatment of puerperal septicemia, by giving priority to the washing out of the uterus. He went further, and introduced an appropriate reference into the therapeutic debate, by declaring that puerperal fever can be prevented by antiseptic precautions, which is a matter of more importance than any method of treatment. J. J. C.

EDITORIAL NOTES.

Is Petroleum a Fish Oil?—A rather curious question is raised and answered by a writer in the *Cycle et Automobile Industriels*. Is petroleum derived from earth or rocks, or is it fish oil formed

from the fossil remains of fishes? It appears that, when the remains of fishes are distilled under pressure, an oil having a strong resemblance to petroleum is produced. This would seem to show that deposits of petroleum are derived from the transformation of the fossil remains of fishes.

Correction.—We are pleased to take this opportunity of stating that through a misprint, in the excellent illustrated article, by Dr. T. H. Manley, of New York, entitled "Clinical Report on Three Cases of Unusual Interest," appearing on pages 289 to 298 of our May issue, the name of the firm who manufactured the ribbed abdominal supporter for the case in question, and which is illustrated on pages 297 and 298 of that number of this journal, was misspelt. It should have read *J. C. Schnoter Co.*, not "J. C. Schuotter Co."

Still Another Acquisition to our Staff.—It is a source of no little pleasure to us to be able to announce to our readers the addition of another name to our staff. Dr. J. J. Mackenzie, Bacteriologist to the Ontario Provincial Board of Health, has consented to allow his name to be identified with our Department of Pathology. We are much pleased to have him as one of our number, and can assure our readers that they may look forward to having the pleasure of seeing contributions from Dr. Mackenzie's pen frequently. We have, indeed, every reason to be proud of our staff, being, as it is, one of the strongest identified with any medical journal on the continent of America.

Massage to Promote Uterine Involution.—Dr. Bosc, of Montpellier, employs systematic massage of the womb to favor and accelerate involution after delivery, ordering it to be done for five minutes or so, immediately after delivery and once or twice a day, on the first five or eight following days. The operation, which is very simple, may be done by a nurse, and consists in applying friction in a circular direction to the uterine globe. The results are a more rapid disappearance of the lochia, the descent of the uterus behind the pubes in seven or eight days, and the ability of the patient to get out of bed at this time without incurring the dangers usually ascribed to an early rising after confinement.

The American Electro-Therapeutic Association.—The ninth annual meeting of the American Electro-Therapeutic Association will be held in Washington, D.C., on September 19th, 20th and 21st, 1899, under the presidency of Dr. F. B. Bishop, of Washing-

ton. Quite a number of papers of great scientific value have been promised, and the Committee of Arrangements insures the members a very entertaining and pleasurable meeting. Aside from the sessions of the Association, the Committee has completed arrangements for a trip to Mount Vernon, one to Arlington, and several other social features. The headquarters of the Association will be at Willard's Hotel, where special rates will be given to members and their families during the meeting.

An Early Bacteriological Diagnosis of Tuberculosis Advisable.—One of the most important duties of the general practitioner is to assist in the early recognition of tuberculosis, because, if a cure is to be looked for, the disease must be dealt with in its early stages. We observe that in reporting the results of the examination of specimens of tubercular sputa, sent to the Provincial Laboratory, Dr. Mackenzie gives the following statistics: Symptoms existing 1 month and under: 18 specimens (positive 3, negative 15), percentage, positive, 16.6; 1 to 2 months: 26 specimens (positive 9, negative 17), percentage, positive, 34.6; 2 to 3 months: 14 specimens (positive 7, negative 7), percentage, positive, 50.0. The fact that a positive diagnosis can be made within two months from the onset of the disease shows that in suspicious cases the bacteriological test should be made very soon.

The Ingredients of Chartreuse.—In an article entitled "Alcohol and the Liqueurs," which appeared in the *Revue des Deux-Mondes*, Viscount d'Avenel gives detailed information of the manufacture of chartreuse. More than forty plants are used in making it. The principal one is balm, in varying proportions of from 250 to 500 grammes to the hectolitre; hyssop, peppermint, alpine milfoil, the seeds and roots of angelica, 125 to 250 grammes of each; then in smaller quantities, ranging from 15 to 30 grammes, flowers of arnica, thyme, costmary, poplar buds, Chinese canella, mace, coriander, aloes, cardamoms, etc., etc. This is not all: to each hectolitre are added three litres of an alcoholic preparation containing marjoram, pinks, lavender, four kinds of pepper (long pepper, Jamaica pepper, cubeb and common kitchen pepper), pine tree resin, treacle, hyacinth, nutmeg balsam, rubbed up together in Malaga wine. To make up a hectolitre (22 imperial gallons) of liqueur 2,600 grammes (5.73 pounds) of these ingredients are required, and the retail price is not over 8 francs ($1.60) per litre. The quality and the age of the alcohol used in making chartreuse are its principal merits.—*Le Progrès Médical*.

Why is the Negro Black?—In the *Revue d'Hygiene* the following explanation is offered of the negro's color: At first sight the color of the negro seems paradoxical; it seems that the derm would be better protected by a white pigment, which reflects heat, than by a black one, which absorbs it. Experience, however, proves the contrary. Professor Mosso has shown that, in order to be able to stand solar radiation on the tops of lofty mountains, travellers have to smear their hands and faces with lamp-black. (*Revue Generale des Sciences, 1899, p. 185.*) Mr. C. E. Guillaume offers the following explanation of this phenomenon: The pigment of the negro's skin absorbs heat, which is radiated outwards to his oily skin. Dr. d'Arsonual has shown, by experiments in calorimetry, that fats have a considerable emissive power in the infra-red. In the negro, all radiations of heat emitted by the derm are situated pretty far inside the infra-red (black pigment and red blood), where the fats radiate strongly and grow cool as well. The black pigment protects its derm from solar attacks and cools at the same time by the radiation of heat from the oily layer which covers it. In fact, contact with a negro's skin always leaves a sensation of coolness. As Mr. Guillaume wittily expresses it, "The negro lives in the shade of his skin."

Ontario Medical Library Association.—In our March issue we gave our readers a list of books—the first annual instalment for the "Bovell Library," purchased through the generosity of our old friend William Osler. The list will repay a glance over it again, containing as it does many of the latest works on medical subjects proper. In order to enable the Association to keep up with the times an "Endowment Fund" was established some months ago for the prompt purchase of the best new publications as issued, the interest alone to be used. As the fund is only in its infancy, and very little money as yet available, it is hoped that a generous response will be made to this fund by many of the profession, who will not miss a small contribution in so good a cause. Many may not feel justified, for one reason or another, in giving to this fund, but we are all able to help along the Library in another way, and that is by sending it all the old journals about the office. These can be utilized in "exchange" with other libraries. All that is necessary is to pack them in a box, address it to the Ontario Medical Library, corner Bay and Richmond Streets, and freight will be paid on arrival, and an acknowledgment made through this journal. Books of any date will also be gladly

received. They are of some use to the Library. The great majority of old issue are of no use whatever to the regular practitioner except to remind him that he is "getting on in life." Therefore, look over the old book-cases, cupboards, store-rooms and out-of-the-way corners, and send on all you do not need, and, moreover, never look into from one year's end to another. You will earn the gratitude of your better-half at every house-cleaning, and at the same time the thanks of the Library.

The Best Means to Exclude the Plague.—Plague has taken a firm hold of India, and is playing serious havoc. A London telegram states that it is also at work in Mecca. Under these circumstances serious repressive efforts will be made to prevent its appearance in Europe. The existence of the plague at Hong Kong, where, since March 4th, there have been 498 cases and 436 deaths, shows the necessity of carefully scrutinizing travellers, particularly the Chinese, who come from China to Canada. It is reassuring to be informed by physicians who practise in China, that only in isolated cases are Europeans living in the East attacked by this disease, but it would be more satisfactory to know the percentage of the European population of Hong Kong who have been attacked. There is no doubt that the bacillus of plague, which has been recently discovered by Yersin and Kitasato, seems to thrive in very filthy spots, such as Chinatown in Hong Kong, and that if introduced into unclean cities, such as Naples, Genoa and Marseilles, it might become epidemic. It would be an error to say, however, that mere filth would cause the plague. Smallpox, a more contagious disease, requires the presence of a specific infection, before it can develop in a new subject, no matter what amount of filth may be present in his surroundings, and so, if the plague is not introduced into Canada by the persons or clothing of Chinese emigrants, we need not fear its advent among us. The first and most important line of defense is to be drawn up in the port of Victoria, B.C., and we hope that the Canadian Government will take the needful precautions to make it efficient.

PERSONALS.

Congratulations to Dr. G. A. Carveth on the birth of his latest.

Dr. W. H. Lowe has returned from England much improved in health, we are glad to know.

Dr. Harry Oldright has moved away from Toronto, having purchased a practice at St. Catharines, Ont.

Dr. James H. McCullough, of Owen Sound, has been appointed a member of the Provincial Board of Health.

Dr. H. B. Anderson will assume the editorship of the *Canada Lancet* as soon as he returns in September from the Old Country.

Drs. G. A. Peters and F. LeM. Grasett spent two weeks in camp with the Governor-General's Body Guard at Niagara last month.

Among the graduates in medicine at the recent convocation at Toronto University was Dr. J. J. Mackenzie, the bacteriologist of the Provincial Board of Health.

Dr. E. E. Kitchen, member of the Provincial Board of Health, has returned after attending the Richmond meeting of the International Association of Railway Surgeons.

Dr. Bruce Riordan, Dr. C. R. Dickson, Dr. Herbert Bruce, Dr. W. A. Young and Dr. T. McKenzie returned from the American Railway Surgeons' convention at Richmond, Va., on the 10th ult.

Dr. H. P. H. Galloway, who, with Dr. B. E. McKenzie, has charge of the department of orthopedic surgery on the staff of this journal, has been elected a member of the American Orthopedic Association.

Dr. J. E. Graham is at present remaining at the Sanitarium at Gravenhurst. We understand he is a little better, and assure the doctor of the sympathy of the entire profession in his recent illness. Every one of his friends hope for his speedy recovery.

Dr. T. B. Richardson was operated upon for appendicitis two weeks ago by Dr. J. F. W. Ross. We are pleased to know that he is recovering. The doctor has suffered from two attacks of that disease inside of a very short time, and very wisely decided to take steps to prevent a recurrence.

What is the matter with so many of our *confreres* in the city this summer that such a number of them have evidently run up against the lawn mower? The barbers are having, indeed, a prosperous summer and the gentler sex plenty of encouragement to practise the Hobson art. But why disfigure the face so? Names we will not mention, but simply give the hint.

The Physician's Library.

BOOK REVIEWS.

A Text-Book on Practical Obstetrics. By EGBERT H. GRANDIN, M.D., Gynecologist to the Columbus Hospital; Consulting Gynecologist to the French Hospital; late Consulting Obstetrician and Obstetric Surgeon of the New York Maternity Hospital; Fellow of the American Gynecological Society, etc. With the collaboration of GEORGE W. JARMAN, M.D., Gynecologist to the Cancer Hospital; Instructor in Gynecology in the Medical Department of the Columbia University; late Obstetric Surgeon of the New York Maternity Hospital; Fellow of the American Gynecological Society, etc. Second edition. Revised and enlarged. Illustrated with sixty-four full-page photographic plates and eighty-six illustrations in the text. 6½ x 9½ inches. Pages xiv.-461. Extra cloth, $4.00 net; sheep, $4.75 net. Philadelphia: The F. A. Davis Co., Publishers, 1914-16 Cherry Street.

There are few subjects with which the practitioner must be so thoroughly acquainted as those of Gynecology and Practical Obstetrics, so as to enable him to cope with whatever emergencies he may meet; and there is no one who is more suddenly called upon to exercise care, judgment and tact than the obstetrician is. A theoretical knowledge of Obstetrics may save a student while working with the manikin, but if he cannot go further than that he will prove an utter failure when launched into practice and summoned to deal with the living subject. The author has evidently given a great deal of thought to this point, and has laid great stress upon the practical side of his subject, allowing the theoretical aspect to look out for itself. There is hardly a study which is being subjected to so many changes from year to year as that of Obstetrics, so that any book dealing with it must of necessity soon become old. It is but a short time since Dr. Jarman published the first edition of his work, and it can only be due to a very large demand for it that he has been called upon so soon to rewrite it and publish a second. His book can truthfully be called a guide to practice. He has endeavored to make and has succeeded in making his teaching essentially clinical, not troubling the reader regarding data and statistics which are quite unnecessary as far as practical work is concerned. The second edition of the work has been thoroughly revised by Dr. Grandin, most of the revision, however, having been made in regard to Obstetric Surgery and the puerperal state, as it is in these that most progress has been made recently. Several new illustrations have also been added.

International Clinics. A Quarterly of clinical lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology and Dermatology, and specially prepared articles on treatment and drugs, by professors and lecturers in the leading medical colleges of the United States, Germany, Austria, France, Great Britain and Canada. Edited by JUDSON DALAND, M.D., University of Pennsylvania, Philadelphia; Instructor in Clinical Medicine and Lecturer on Physical Diagnosis in the University of Pennsylvania, etc., etc. Vol. I., ninth series. 1899. Philadelphia: J. B. Lippincott Co. 1899. Montreal: C. A. Roberts, 593A Cadieux Street, Canadian agent.

Following almost at once on the eighth series comes the ninth series of "International Clinics." It is seldom that a firm is called upon to publish in

such rapid succession two series of any one work, and it can only be due to a steadily increasing demand from a large army of appreciative and intelligent readers. Vol. I. of Series IX. is considerably larger than that of Series VIII., and has an entirely different staff of contributors. For instance, such names as those of John Ashhurst, Jr., M.D., (the late) John B. Hamilton, M.D., Alfred Fournier, M.D., Thos. R. Pooley, M.D., W. L Rodman, M.D., and Alex. J. C. Skene, M.D., appear on Vol. I. of this series, who took no part in the compiling of Series VIII. The contents of Vol. I. of Series IX. are made up under the same captions as those of Series VIII., viz., Drugs and Remedial Agents, Treatment, Medicine, Neurology, Surgery, Gynecology, Ophthalmology, Laryngology and Rhinology. Under the heading of Drugs and Remedial Agents, Dr. Horatio C. Wood has a capital article entitled "Cold as an Antipyretic." Under Treatment, the lectures of most interest are those by Prof. J. Grancher, on "The Treatment of Tuberculosis"; by Dr. Martin Mendelsohn on "The Care and Treatment of Phthisical Patients," and by Dr. G. Variot on "The Treatment of Acute Laryngitis in Children." Dr. John Ashhurst, Jr., has an able article under Surgery, entitled "Four Cases of Injury to the Head." The late John B. Hamilton, M D., has several contributions, entitled "Carcinoma of the Rectum," "Tuberculosis of the Cervical Glands," "Spina Bifida," and "Melano-Sarcoma of the Testicle." Dr. Alexander J. C. Skene, under his department, discusses "The Use of Electricity in Surgery." Altogether this volume is ahead of that of the last series.

The Study of the Hand for Indications of Local and General Disease. By Edward Blake, M.D., Member Royal College of Surgeons; Life Associate Sanitary Institute, Great Britain; Member French Hygienic Society; Honorary Member Michigan Medical Society; Found. Fell. British Gynecological Society, etc., etc. Second edition. London: Henry J. Glaisher, 57 Wigmore Street, Cavendish Square W. New York: G. P. Putnam's Sons. 1899.

A busy man, such as the author of this book, would have little time left at his disposal when called upon to rewrite from cover to cover any book inside of so short a time as four months. It is unquestionably the fact that the study of the hand under many circumstances proves a most valuable aid in the diagnosis of many conditions; and a work such as this gives information which cannot easily be procured elsewhere. For instance, Dr. Blake in his book, after dealing with temperature, color, texture, the nails and their development, parasites, eruptions, whitlow, and hyperkeratosis, in Section VIII., studies the form of the hand, and especially the fingers, such as Heberden's nodes, Haygarth's nodosities, and Dupuytren's contraction. Section IX. is on "Clubbed Fingers, and their Clinical Significance." A most interesting chapter is Section XIV., on "The Pulse, the Dynamics of Respiration, Fallacies of the Radial Pulse and Chloroform Syncope." The book is fairly well illustrated, and is printed on specially good paper. The author has treated fully for the first time cerebro-spinal diagnosis from the hand. He has given some new points in the pathology of arthritis, and of acrosphacelus. The treatment of writer's cramp is given in full, as also the clinical significance of the various forms of tremor.

Electro-Hemostasis in Operative Surgery. By Alex. J. C. Skene, M.D., LL.D., Professor of Gynecology in the Long Island College Hospital, Brooklyn, N.Y.; formerly Professor of Gynecology in the New York Post-Graduate Medical School; Gynecologist to the Long Island College Hospital; President of the American Gynecological Society, 1887; Corresponding Member of the British, Boston and Detroit Gynecological Societies, etc, etc. New York: D. Appleton & Co. 1899. Toronto: The George Morang Company, Limited, Canadian agents.

The author, who is too well known a member of the profession and writer to require more than passing mention, had as his object for publishing this

work the more general dissemination of knowledge regarding the use of the electro-cautery in general as well as special surgery, Dr. Skene feeling that such would supplement the third edition of his book on "Diseases of Women," in which he considered electro-hemostasis was but too briefly referred to. There is little doubt that many recent improvements have taken place in surgical methods, so that after having had experience which is confirmatory of the value of any particular method, it is but right that such a one should give the profession the result of his experiments. After giving a description of the instruments required, Dr. Skene, in this book, goes on to give the results of the hemostatic process, after which he treats electro-hemostasis in ovariotomy, in myectomy and abdominal hysterectomy, in ovario-salpingectomy, and in appendectomy. He then takes up the treatment of cancer of the uterus by the electro-cautery and hemostasis, the electro-cautery in the treatment of pelvic abscess and diseases of the vulva and vagina, electro-hemostasis in extirpation of the mammary and lymphatic glands, and in extirpation of tumors of the bladder. The book is one which will prove a most valuable adjunct to any work on general diseases of women or general surgery, and we bespeak for the publishers a large and comprehensive sale.

Saunders' Medical Hand Atlases. Atlas of Diseases of the Skin, including an epitome of Pathology and Treatment, by Prof. Dr. Franz Mracek, of Vienna. Authorized translation from the German. Edited by Henry W. Stelwagon, M.D., Ph.D., Clinical Professor of Dermatology Jefferson Medical College, Philadelphia, etc. Sixty-three colored plates and thirty-nine full-page half-tone illustrations. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899. Toronto, Ont.: J. A. Carveth & Co., Canadian agents.

For any one publisher to undertake and contract to sell 100,000 copies of atlases is wonderful indeed, but for that firm to have such a run as to encourage them to double that figure is simply phenomenal. Such is the case with "Saunders' Medical Hand Atlases." In one way we can hardly wonder at it, when the beauty of the work is considered. We feel free to say that seldom have we seen colored illustrations showing such perfect workmanship. The best manner to describe them would be to say that they are positively life-like. The delicacy of the tinting of Plate 30, for instance, illustrating acne, is perfect, and helps to show that the artists employed were of no mean character. Plates 23 and 23a, showing eczema artificiale vesiculosum, are a credit to any firm of publishers. Such a series of atlases are alone an education to any man possessing them, as the text accompanying each plate is such as to thereafter enable any one to diagnose a case from life with comparative ease.

The Newer Remedies. Including their synonyms, sources, methods of preparation, tests, solubilities, incompatibles, medicinal properties, and doses as far as known, together with sections on organo-therapeutic agents and indifferent compounds of iron. A reference manual for physicians, pharmacists and students. By Virgil Coblentz, A.M., Phar.M., Ph.D., F.C.S., etc.; Professor of Chemistry and Physics in the New York College of Pharmacy, Author of "Handbook of Pharmacy," Member of the Chemical Societies of Berlin and London, Fellow of the Society of Chemical Industry, etc. Third edition. Revised and very much enlarged. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1899.

For a physician to attempt to keep informed concerning the constantly increasing number of remedies is almost impossible without the aid of some work such as that of Dr. Coblentz. This book gives an alphabetically and systematically arranged list of all the recent additions to the remedies used in the treatment of disease. The author has given both synonyms and cross references. It is but four years since the first edition of the book was published, only one year elapsing between that and the second, and now a third and still better one is given to the profession. A book like this is of boundless use to

the practitioner, as material of this kind, which is changing almost from month to month, cannot be expected to be found in an ordinary work on medicine or treatment. A. J. H.

Clinical Lectures on Neurasthenia. By Thos. D. Savill, M.D., Physician to the West End Hospital for Diseases of the Nervous System, London ; Examiner in Medicine in the University of Glasgow, etc., etc. London : Henry J. Glaisher, 57 Wigmore Street, Cavendish Square W. Five shillings, net.

Most of these lectures were originally delivered as part of a post-graduate course organized at the Paddington Infirmary in the year 1891, and the balance at the Welbeck Street Hospital for Diseases of the Nervous System during 1897-98. They were since collected and are now published in book form. The author is strongly of the opinion that it is a pity that the wealth of clinical material, especially of mental and nervous disorders, as found in such institutions as the Metropolitan Workhouses and Infirmaries, should be passed over without any practical benefit to the profession resulting. He also feels that our profession as a body have always been too much inclined to look upon all diseases of the nervous system, especially of a functional type, as almost hopeless, and it is with a hope of remedying such and throwing more light upon this department of medicine, that he consented to publish this work. The lectures number just five, the first comprising the Pathology of the Functional Diseases of the Nervous System ; lecture 2, Nervousness or Neurasthenia ; lectures 3 and 4, the Diagnosis and Pathology of Neurasthenia ; lecture 5, the Mental Symptoms of Neurasthenia and Neurasthenic Insanity.

An Epitome of the History of Medicine. By Roswell Park, A.M., M.D., Professor of Surgery in the Medical Department of the University of Buffalo, etc. Based upon a course of lectures delivered in the University of Buffalo. Second edition. Illustrated with portraits and other engravings. 6½ x 9½ inches. Pages xiv.-370. Extra cloth, $2.00 net. Philadelphia : The F. A. Davis Co., Publishers, 1914-16 Cherry Street. 1899.

Dr. Roswell Park, in writing his "Epitome of the History of Medicine," struck a chord whose note has resounded far and wide. It is scarcely a year since the first edition of his work appeared, so that the author must feel that his labor has at least not been in vain. The book was the outcome of a series of lectures first delivered in the Medical Department of the University of Buffalo, and since that rearranged and enlarged. The work comprises the most important facts and events which have taken place in medicine, dating from the Age of Foundation when medicine in its earlier form came to be known among the Orientals and Greeks ; through the Ages of Transition, of Renovation, down to the time of Astley Cooper, Guthrie, Syme and Simpson. The book is full of deepest interest, and there is hardly a doubt that every practitioner of medicine should be in possession of the second edition if he does not have a copy of the first.

Lord Lister and Surgery. By Robert Turner, M.A., M.D., F.R.C.S. London : Henry J. Glaisher, 57 Wigmore Street, Cavendish Square W. 1899.

This small pamphlet forms a delightful half-hour's reading in giving an account of the wonderful progress made by Surgery under Lister from the days of the introduction of the antiseptic spray down to the present. It costs but one shilling.

REPORTS RECEIVED.

Seventeenth Annual Report of the Provincial Board of Health of Ontario, being for the year 1898.

Report of the State Board of Health of Connecticut, 1898.

Selected Articles.

THE TREATMENT OF ASTHMA.

BY ROBERT C. KENNER, A.M., M.D., LOUISVILLE, KY.

THERE is, perhaps, no disease which is more distressing to the patient than asthma.

The paroxysms of dyspnea are very agonizing and often persist for a considerable length of time. The burden on the heart is very great when the attacks are frequently repeated, or continued for a long time.

It is entirely foreign to the purpose of this paper to discuss at length the etiology of asthma.

I hold with Biermer that the true explanation of the symptoms is a "spasm of the muscular tissue of the small bronchi." The causation of this condition has both constitutional and exciting elements. The constitutional elements of causation comprise a neuropathic tendency, nerve lesions, epilepsy and other affections of the nervous system. According to the best observers males have the disease more frequently than females, although my notes show about an equality in the number of males and females. Exciting causes comprise climatic influences and individual susceptibilities to certain odors. Some patients are at once seized with an attack of asthmatic dyspnea when they inhale the odor of ipecac and other drugs. Others cannot bear to have certain animals, flowers or vegetables brought near them. All these are factors which may be said to be true of individuals, but which cannot be classified.

In about 20 per cent. of my cases I have found chronic bronchitis associated with asthma, and emphysema was present in about 15 per cent.

The treatment of asthma should be considered under two heads: First, relief of dyspnea; second, systemic.

To carry out the first indication is a matter of great importance since the burden on the heart during an attack of dyspnea is very great. To relieve these attacks surely and speedily must therefore be our first aim. To accomplish this purpose reference to the text-books will show that a great number of remedies have been employed. Bromide of potassium, spirits ether comp., belladonna and all of the sedatives, anodyne and anesthetic remedies have been used. Many physicians give chloroform by inhalation to relieve the dyspnea. Ipecac and lobelia were the remedies which the

older practitioners depended upon to accomplish this purpose. But, with a better comprehension of the factors present in these cases, remedies such as ipecac, lobelia, chloroform, and even the bromides, and in a word, remedies which add additional burden to the heart, are losing favor.

To overcome the attacks of dyspnea I have employed only nitroglycerin, strychnine and morphine hypodermic tablets (Sharp & Dohme's). These tablets at once relieve the dyspnea, and do not act as a cardiac depressant as is the case with the anti-spasmodic, sedative or anesthetic drugs usually exhibited in this condition. Conversely, however, the strychnine in these tablets acts as a cardiac stimulant, and shortly after the hypodermic injection we can discern an improvement in the volume of the pulse. The action of these tablets is prompt, and improvement of the symptoms is manifest in a very short time. Often entire breaking up of an attack of dyspnea is seen in twenty minutes after the hypodermic injection. The measures to be instituted to establish a cure of the asthma will, of course, depend to a large extent upon the conditions existing in the case under consideration.

When chronic bronchitis is present we will make little headway if we fail to give constructives and have the patient guard against the vicissitudes of the weather. In treating the disease also we shall have to administer remedies applicable in emphysema when that is present.

In my practice no single remedy has been found equal to the iodide of potassium for extending the time between the attacks of dyspnea and effecting an entire cessation of these attacks. Of course this agent is conjoined in each case with such other drugs as are considered appropriate.

I give below the outline of several cases which have been treated on the lines laid down here, these being only a few of a great many tabulated cases.

Mrs. S. C., age 25, a delicate woman, eight months pregnant. She had had asthmatic attacks for the past week, which had increased in severity and frequency. This attack had persisted for more than an hour, and the patient was almost exhausted from dyspnea. Her pulse was 120. I at once gave her a hypodermic injection of nitroglycerine, strychnine and morphine tablets, and this gave her relief in a short time, and her pulse increased in volume and was lessened in frequency. She was suffering with associated bronchitis, and I gave her cod liver oil made palatable after meals, and iodide of potassium in doses of five grains before meals. On this treatment she made a complete recovery. She would take the iodide potassium for two weeks and then leave it off for a like period. In this way she avoided iodism.

Mr. O. H. R., age 41, had asthma for a year. He had an attack of influenza a year ago, and since that time had had a mild bronchitis. During this time he had begun to have attacks of difficult breathing, and they had grown more frequent and frequently lasted

an hour. I relied upon the nitroglycerine, strychnine and morphine tablets to relieve these attacks and was never disappointed in them. On cod liver oil and iodide potassium given as in the first case he got along well and steadily improved, and is now entirely well.

Mrs. L. F. Q., age 40, had been a great sufferer for the past four years with asthma. The attacks exceeded in their violence and persistency any case I ever saw. The physician who had previously treated her relied upon the inhalation of chloroform to relieve the dyspnea, he having tried all the usual remedies to no purpose. When called first to this patient I lost no time in giving her a hypodermic injection of the nitroglycerine, strychnine and morphine tablets and found my patient got relief in a very short time. She subsequently used these tablets hypodermically when she felt the least premonition of an attack of asthma, and in this way aborted the attack. On these and iodide potassium, plus the regular administration of cod liver oil, she got along well and she has now stopped the employment of the medicines, and has now gone some time without the use of anything.

I can therefore most heartily recommend Sharp & Dohme's asthmatic hypodermics.

Life on a Rubbish Heap.—As we all know, a vast amount of sickness comes about in a mysterious manner, that is to say, no man knows whence it cometh. To discuss this subject would require a treatise, more or less, but there is one particular item that may be adverted to with the full and certain hope of instructiveness to be gathered therefrom. That detail is nothing more than the modern dwelling which is built upon "made" ground, the substance whereof has been built up by the slow increment of cartloads of ashes, rubble, manure, dust, dead cats, mud, ashes, and the rest of the multifarious abracadabra of house refuse. The result of building on such a foundation is that the body of the house, when heated, draws up all the ground air, laden with noxious effluvia, and possibly with pathogenic bacteria. Of course the provision of perfectly sound, impermeable concrete under the whole house would prevent the main part of the mischief. But how many suburban houses are thus provided? Not long ago the present writer, out of curiosity, went over some houses in the course of erection, the rent of them being from £70 to £80 per annum. The damp-proof courses were made of a kind of tarred paper, and the garden level was raised by a tight packing of wet clay, while the foundation of the hall space—that is to say, a long passage running through the house—was filled up with the same material. In that case life on a mudbank was substituted for that on a dust heap, which we began by contemplating. By all means let intending purchasers or tenants inquire carefully into the history of the sites of the houses in view, and let them have a skilled inspection made by a competent surveyor.—*Med. Press and Cir.*

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The Canadian Journal of Medicine and Surgery

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Original Contributions.

RESTORATION OF THE LOWER LIP AFTER ITS ENTIRE REMOVAL FOR CANCER.

BY FREDERICK WINNETT, M.D., M.R.C.S.(ENG.),

Surgeon Outdoor Department Toronto General Hospital and Victoria Hospital for Sick Children.

THE mutilation caused by the removal of the entire lower lip is so great that some method for its restoration should invariably be adopted. The neglect to do so is no doubt due to the complicated nature and frequent failure of such methods as those introduced by Malgaigne, Syme, Dieffenbach and Langenbeck.

I wish to call attention to a case in which I recently modified the method of Regnier, as it is simple of execution; gangrene is impossible, and the cosmetic effect perfect. Photograph No. 1 shows how extensively the lip was affected. Four and a half years ago a warty growth appeared, which two and a half years later became cancerous, and was removed by a quack with plasters. A year later it returned and was treated in a similar manner. The present growth began last August. Glands could not be felt.

With scissors the part was freely removed, the cut extending in a curved direction from the angles of the mouth to within three-quarters of an inch of lower margin of chin. Two inches below this wound a parallel incision was made five inches in length through the skin down to the periosteum, and the bridge of skin freed. A second bridge of skin was raised below this, one inch wide and two inches in length. Several enlarged submental glands were removed. The upper bridge of skin was slid up in contact

with the upper lip, and anchored to the periosteum with four silk-worm-gut sutures passing through the skin. The lower incision was sutured bringing its ends together, thus causing it to assume a vertical direction, and forcing the lower bridge of skin up to cover the entire wound left by the removal of the upper bridge. The patient returned to business in three weeks, and photograph No. 2 shows him as at present.

My method differs from Regnier's in two particulars. The directions given by Regnier for estimating the width of the bridge of skin—one centimeter wider than part removed—would often bring the cicatrix visible on the chin. The average width of the



skin from the margin of the lip to the border of the chin is two inches. I would therefore recommend that the bridge be always two inches wide in order to cover the whole chin and bring the cicatrix below it.

In the second place, leaving the raw surface to granulate is most objectionable, not only on account of prolonging convalescence and leaving a scar, but also on account of ultimate contraction drawing the lip down. Grafting would likely fail owing to the discharges, and in a male would leave a bald spot. My plan utilizes the loose skin of the neck, leaves no part uncovered and hastens recovery.

BACTERIOLOGICAL WORK IN THE LABORATORY.*

BY M. I. BEEMAN, M.D., NEWBURGH.

THE great service rendered to humanity by the science of bacteriology in helping us to understand the nature of the disease under discussion is admitted by all.

While most of the bacteriological investigation and research must necessarily be done in the well-equipped laboratory, there is much that general practitioners outside of cities may do for the benefit of their patients by themselves making microscopical examinations of sputum, serum, urine, pus, etc., for those suspected of tuberculous disease.

It is my practice to make a microscopical examination of the sputum of patients with cough and expectoration lasting three weeks or more, especially if attended with elevation of temperature, disorder of digestion, or loss of flesh. In difficult or doubtful cases I seek the aid of the laboratory expert.

The advantage of having the specimens fresh and as frequently as desired; and, on the other hand, the annoyance of packing and sending away of samples, and the delay in finding out results, make the inducements strong for one to do this work for himself if possible.

The fact of having the necessary facilities for making these examinations helps us to retain the confidence of these patients to whom we are giving so grave a prognosis.

The value of the evidence gained by noting from time to time the number and size of the tubercle bacilli, the presence or absence of secondary infection, as indicated by the streptococci and other pyogenic organisms, cannot be overestimated.

In our management of these cases successful results can be attained in proportion to the degree that we can imitate the conditions found in climatic treatment, and the methods employed at sanatoria.

In the highlands in the north of Ontario there are many localities well adapted as sites for sanatoria. We find there moderate altitude, sandy soil, and good chances for drainage. Hills and pine forests afford protection from winds and changes of temperature. The air is pure and free from pathogenic dust.

To these localities many of our afflicted ones would go, because there would be no long and tiresome journey; no difficulty or danger from acclimatization, and not so great a dread of separation and death far from family and friends; and, lastly, lessened expense.

Can we not by persistent agitation induce our philanthropists and legislators to establish sanatoria in several parts of the Province, and by so doing help the great army of consumptives to a chance for restoration to health, and at the same time lessen the danger of infection to the healthy?

* Read at meeting of Ontario Medical Association, June 13th and 14th, 1899.

How quickly would leprosy be dealt with by law if it obtained a foothold in Ontario? And yet leprosy is less contagious and less quickly fatal than tuberculosis.

1. As to home treatment: Make an early and positive diagnosis by microscope and physical signs, and, as a rule, frankly inform the patient of the nature of the disease.

2. Insist on as near an out-door life as possible, suitable exercise in non-febrile cases, and rest where temperature goes above 102°.

3. Give abundant food, and attend closely to the condition of digestive organs.

4. Avoid dusty, damp or unwholesome places in order to escape secondary infection as far as possible. Some one has justly said that "consumption is tuberculosis with pyemia added."

5. Our best drugs for internal administration are creosote, cod liver oil and hypophosphites.

6. I have seen some benefit from the use of nuclein, but patients dread the pain caused by the injections so much that I now seldom use it.

7. Antiseptic inhalations, as a rule, appear to be of benefit. Among other agents, I have for some months past used formalin, and with very great advantage. At first the vapor is somewhat irritating, but they tolerate it better the longer they continue its use. It seems reasonable to suppose that antiseptics inhaled into the lungs meet with and poison many streptococci, bacilli tuberculosis and other pathogenic germs, and thus lessen hectic, and perhaps retard the extension of the disease to healthy lung tissue.

I have now only a few words to say about prevention. The increase in prevalence of consumption in our part of Eastern Ontario during the past few years is quite noticeable to the practising physician without the confirmatory evidence of the Registrar-General's reports.

1. The favorable culture fields that catarrhal conditions of the mucous membranes of the air passages afford to the germ of tuberculosis should cause us to give these diseases careful treatment.

2. Phthisical patients must be carefully instructed as to the disposal of their sputum in such a manner as to avoid infecting others and reinfecting themselves. The early removal of these patients to sanatoria would greatly lessen the chances of infection to their families.

3. Very great care should be taken to prevent the use of the milk and flesh of tuberculous animals as food. It is claimed that tuberculosis in cows is largely due to overmilking. Bulls, steers and unimpregnated heifers escape. There should be legislation to compel dairymen and farmers to allow cows to be dry for three months of the year, and that healthy stables be provided for them.

4. The existence of tuberculosis among domestic animals (dogs and cats) is not uncommon, and should be looked after.

5. Finally, strict obedience to hygienic laws should be especially enjoined on those who by previous disease or family history may be deemed predisposed.

Orthopedic Surgery.

. . . IN CHARGE OF . . .
B. E. McKENZIE, B.A., M.B., AND H. P. H. GALLOWAY, M.D.

ON THE CONSERVATIVE TREATMENT OF TUBERCULAR JOINTS AND COLD ABSCESSES AS PRACTISED BY MIKULICZ OF BRESLAU, 1890 TO 1896.

C. W. CATHCART, F.R.C.S. (*Scottish Med. and Surg. Journal*, March, 1899) gives an account of the methods practised by Mikulicz in the Breslau Surgical Klinik. In addition to fixation and rest, Mikulicz employs the injection of iodoform, and the artificial production of venous congestion, known as Bier's treatment. He employs a 10 per cent. emulsion of iodoform in glycerine, the great advantage of the glycerine as a vehicle being that it is itself a strong antiseptic, destroying all known pus-forming organism. Consequently, the emulsion does not require to be sterilized. Iodoform poisoning is avoided as far as possible by attention to the proper doses. The quantity of the fluid injected depends upon circumstances. For parenchymatous injection into the substance of pulpy synovial membrane from 4 c.cm. in young children, to 30 c.cm. in adults, may be used. For cold abscesses larger quantities may be employed; as much as 100 c.cm. may be used for adults and proportionately less for children. If the granulation wall of the abscess has been removed by operation a much less quantity must be employed, as absorption will then more readily occur. The symptoms of iodoform poisoning described are, severe mental affection, raised temperature, rapid pulse, paleness of the face, fixed eyes, spasmodic movements, albumen and strong iodoform action in the urine and the latter also in the saliva. The test consists in adding a little starch paste with sulphuric and nitric acid to the suspected fluid; the iodine is set free and turns the starch blue. It is stated that the injection of glycerine itself has been shown capable of producing toxic symptoms, such as elevated temperature, rapid pulse, sickness, vomiting, great thirst, restlessness, stupor ending in coma, blood pigment and traces of albumen in the urine, which is diminished in quantity and of a dark color. In using the injection the skin where the puncture is to be made must be prepared as for a surgical operation, and the instruments either boiled or well-soaked in 4 per cent. carbolic solution before being used. In the Breslau Klinik a medium-sized trochar is used for injection of abscesses.

For parenchymatous injection and other small abscesses a metal-mounted glass syringe is recommended, holding about 15 c.cm. General anesthesia is not used except sometimes in children. The injection of cocaine is not employed for fear of introducing sepsis. The fact that tubercular joint cavities are apt to be subdivided into separate compartments is met by injecting the joint in different places, as it is believed that the action of the iodoform is confined to the part to which it is applied and that its dissemination is limited. In carrying out parenchymatous injection various parts of the joint are attacked in succession. The needle is plunged deeply in, and firm pressure exerted upon the piston of the syringe till the point of the needle feels loose. It is then withdrawn a little and the same is done again. Before taking out the needle, it is thrust in a new direction, and the same procedure is adopted till the required quantity has been used. The next time another part of the joint is selected, and so on till the whole of the affected tissues have been overtaken. Neither massage nor passive movement is employed by Mikulicz to hasten the distribution of the iodoform, but the expected swelling and tenderness are provided for by loosening the bandages, lightening weights, and steadying limbs, previously free, with sandbags.

The injections are made at intervals of from eight to fourteen days as a general rule, sometimes much longer, but never under five days. Where simple spaces are being injected, as in joint cavities or abscesses, the interval is longer because the drug is generally brought into contact with the whole surface at the first injection. At first the fluid distension in an abscess or joint is increased by the injection, but this swelling gradually subsides. Many abscesses are cured by a single injection. Where an abscess complicates pulpy degeneration the two forms of treatment are combined, that is, the abscess is injected at long intervals and the synovial thickening receives parenchymatous injection at shorter intervals. In certain cases tubercular foci and granulation tissue are scraped away, and after the hemorrhage is arrested the wound is closed with sutures, with the exception of a narrow interval left for the subsequent injection of the iodoform emulsion. Cases coming for treatment with fistulæ already in existence, are less satisfactory to deal with. Sometimes the sinus is first scraped out, but in some cases the injection of the emulsion under pressure is trusted to, these injections being repeated two or three times a week. In combination with the application of iodoform, Bier's treatment is employed. The limb is first bandaged firmly to within a few inches of the joint. Above the affected joint a rubber tube or bandage is then wound sufficiently tight to produce a bluish-red discoloration of the skin of the unsupported parts below. The congestion is maintained for from fourteen to eighteen hours out of the twenty-four, the remaining time being employed to get rid of the edema by the use of elastic pressure applied over the joint itself. As improvement goes

on the length of time during which the congestion is kept up may be gradually diminished. Ill effects from the pressure of the elastic bandage are prevented by frequently altering its position and by applying an ordinary bandage between the skin and the rubber.

Of course the necessary splints for securing rest and protection of the affected joints are used the same as when these measures of treatment are not employed. It is claimed that by these conservative methods of treatment, operative procedures are much less frequently required and are much less extensive than formerly, and the treatment has established itself more and more firmly in favor as time has gone on. (One of the most useful ways of using iodoform in tubercular abscesses is to make a small opening into the abscess, allowing its contents to drain out, and then after closing the aperture with sutures to inject the abscess cavity from another point.) H. P. H. G.

The Risks of Infection in Railway Cars.—The *Phila. Med. Jour.* thinks that an illustration of the dangers to which people are exposed who are compelled to use public conveyances, as well as of the necessity of adopting suitable precautionary and corrective measures, is furnished by a recent investigation conducted by Dr. Petri, of the Imperial Sanitary Bureau of Berlin, who found that of ninety-one animals inoculated with material, principally expectoration, obtained from the interior of railway carriages, nearly one-third died as a result, while of the remainder several on being killed were found to have become tuberculous. In those that died in consequence of the inoculation, staphylococci and streptococci were the organisms principally found. Tubercle-bacilli had previously been found by another observer in the dust from railway carriages. Indiscriminate expectoration should be rigorously forbidden, particularly in public places and in public conveyances, and infraction of this rule should be adequately punished, at least by fine. While we may not hope entirely to eradicate transmissible diseases, the observance of a few sensible regulations will go far to diminish their prevalence and restrain their spread. To this end let us make and keep ourselves and our surroundings, together with the air we breathe and the water we drink, as clean, as aseptic as possible.

Orchitis as the First Symptom of Urinary Infection following Stricture.—M. Carlier (*Gazette hebdomadaire de médecine et de chirurgie*, January 26th) reported recently to the French Association of Urology two cases of old-standing blennorrhagia in which no troubles of micturition existed, or at least none such as to lead the patients to consult a physician, but in whom an attack of painful and swollen testicle with fever compelled them to do so. This appeared to be the first noticeable symptom of stricture. Internal urethrotomy promptly put matters right.

Pathology.

IN CHARGE OF . . .
W. H. PEPLER, M.D., C.M., AND
J. J. MACKENZIE, B.A., M.B.

A SYSTEMATIC BACTERIOLOGICAL EXAMINATION OF THE FAUCES IN SCARLET FEVER AS A MEANS OF PREVENTING POST-SCARLATINAL DIPHTHERIA.

BY G. C. GARRATT, M.B. (CANTAB.),
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AND
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Physician to Guy's Hospital; Physician to the London Fever Hospital, etc.

In hospitals for infectious diseases patients convalescing from scarlet fever are not infrequently attacked with diphtheria. The cause of this has been the subject of considerable discussion; but a prevalent theory is to attribute it to the introduction into the scarlet fever wards of unrecognized cases of diphtheria. If this view be correct, it follows that post-scarlatinal diphtheria could be prevented by the early recognition and isolation of such cases. The great difficulty encountered is that the clinical diagnosis of diphtheria is often impossible, especially in patients who are in the acute stage of scarlet fever.

The only other method available for the recognition of the disease is the detection of diphtheria bacilli in the fauces by bacteriological examination. It has, however, been urged that diphtheria bacilli are so frequently present in the throats of scarlet fever patients as to render the isolation of such cases impracticable. F. Ranke[1] found diphtheria bacilli present in the throats of 53.7 per cent. of scarlet fever patients in Munich. Goodall[2] made a bacteriological examination of 87 cases of scarlet fever admitted into the Eastern Fever Hospital. The examination was made immediately after admission. In 6 diphtheria bacilli of the long variety were found, and in 13 bacilli of the short variety. The cases with bacilli were mild, and would not have been recognized clinically as diphtheria. One of the cases with the long variety of bacillus subsequently developed post-scarlatinal diphtheria, and so did 4 other cases in whom no bacilli were found on admission. Sverensen[3] examined 1,547 scarlet fever patients on admission into the fever hospital at Copenhagen, and found diphtheria bacilli in 2.5 per cent. Beggs[4] found diphtheria bacilli in the throats of 51 out of 140 cases of scarlet fever examined, but the examination was made at various periods after the admission of these patients.

Moreover, post-scarlatinal diphtheria was at the time prevalent in the wards, and 14 out of the 51 cases exhibited clinical evidence of the disease. The difference in the results obtained by these observers may, perhaps, be partially explained by the inclusion by some and the exclusion by others of Hoffman's bacillus.

In consequence of an outbreak of post-scarlatinal diphtheria in the London Fever Hospital during the winter of 1895 96, which necessitated the closing and disinfection of some of the wards, it was decided in March, 1896, to examine bacteriologically the throats of all scarlet fever patients then in the hospital, and of all new cases on admission; of the former, those in whose throats diphtheria bacilli were found were isolated.

Our present communication is a record of the examination in this way of all cases of scarlet fever admitted under our care since the above date, our object being to determine, first, the frequency of the occurrence of diphtheria bacilli in the throats of scarlet fever patients; and, secondly, the possibility of preventing post-scarlatinal diphtheria by the isolation of those cases in whose throats these bacilli are found. The cultivations were made upon Loeffler's blood serum, and were examined microscopically on the following day.

Bacilli of the diphtheria family may conveniently be divided into three groups: (1) The Klebs-Loeffler, or true diphtheria bacillus; (2) Bacilli resembling the above in morphological and cultural characters, but non-pathogenic to guinea-pigs; (3) Hoffman's bacillus.

We have discarded the term "pseudo-diphtheria bacillus" because it has been used in different senses by different authors. The distinction between the first and second groups depends mainly on the question of pathogenicity. This test was applied only to the bacilli of cases already in the wards in March, 1896, but it was not found practicable to continue the method. In the present record we have, therefore, coupled together these two groups under the single heading of "bacilli morphologically resembling the Klebs-Loeffler bacillus."

Hoffman's bacillus from a 24-hours old serum culture appears as a short pyramidal organism arranged in pairs, with the bases in apposition, the pairs being often grouped in parallel rows of two or more. Its protoplasm stains uniformly with methylene blue. This bacillus exhibits no pathogenic effect on the ordinary laboratory animals. It can usually be distinguished from members of the first and second groups by microscopical examination.

During the period from March, 1896, to December, 1898, inclusive, 666 cases of scarlet fever were admitted under our care. We have divided them into three classes:

A. Cases in whose throats bacilli morphologically resembling the bacillus diphtheriæ were present on admission. These only amounted to 8, or 1.2 per cent.

B. Cases in whose throats Hoffman's bacillus was found on admission. These numbered 21, 3.2 per cent.

C. Cases in whose throats neither bacillus was found on admission, the organisms present being other bacilli, various cocci, torulæ, etc.

CLASS A.—*Cases of Scarlet Fever in whose throats bacilli morphologically resembling the bacillus diphtheriæ were found on admission.*

No.	Name.	Sex.	Age.		
1	M. S.	F	17	Admission in desquamation period. Throat normal. Transient albuminuria. No sequelæ.	Isolated ; 9 days later no bacilli.
2	G. C.	F	22	Admission in acute stage. Moderate attack. Thin exudation in front of the right tonsil : this by the next day had the appearance of diphtherial membrane. Treated with antitoxin. Rapid recovery. No albumen. No sequelæ.	Isolated; 3 weeks later no bacilli.
3	E. G.	F	9	Admission in desquamation period. Throat nearly well. A week later she developed rhinorrhea and had diphtheria bacilli in the nose. Transient albuminuria. Slight ciliary paralysis followed. Her mother was admitted at the same time with diphtheria, and her sister with scarlet fever. The latter developed rhinorrhea with diphtheria bacilli in the nose, but not in the throat.	Isolated; 3 weeks later no bacilli.
4	E. H.	F	5	Admission in desquamation period. Throat nearly well. Slight rhinorrhea with diphtheria bacilli in nose. No albumen. No sequelæ.	Isolated; 6 weeks later no bacilli.
5	R. F.	M	3	Admission in acute stage. Mild attack. No ulceration or exudation in fauces. No rhinorrhea. No albumen. No sequelæ.	*Kept separate ; 5 weeks later no bacilli.
6	H. I.	F	3	Admission in desquamation period. Throat nearly well. No rhinorrhea. No albumen. Afterwards developed rhinorrhea.	*Kept separate ; 5 weeks later no bacilli.
7	N. H.	M	5	Admission in acute stage. Mild attack. Some follicular exudation in tonsils. No albumen. No sequelæ.	*Kept separate ; 3 weeks later no bacilli.
8	H. C.	F	19	Admission in acute stage. Mild attack. No ulceration or exudation. No rhinorrhea. No albumen. No sequelæ.	*Kept separate ; 3 weeks later no bacilli.

* These patients remain in the ward, but are kept in bed until free from bacilli. During this time their drinking vessels, spoons, and forks are marked and washed separately from those of others.

In only one of these cases, No. 2, was there reason to suspect the presence of diphtheria from the clinical appearance of the throat, and even here the exudation was less suggestive of this disease than is often the case in pure scarlet fever. In Case 3, though the only evidence of diphtheria on admission was obtained from the bacteriological examination, slight paralysis ensued, and in this case there was distinct evidence of exposure to the double infection The other cases exhibited no clinical evidence of diphtheria either on admission or subsequently. Half of these cases were admitted during the acute stage, and half after it had passed; all made a good recovery.

CLASS B.—*Cases of Scarlet Fever in whose throats Hoffman's bacillus was found on admission.*

There were 21 cases in this class. They exhibited no features of special interest, the attacks being of variable severity, but the majority of a mild type. Except that the follicular tonsillar secretion, so frequently present in scarlet fever, occurred in about the usual proportion of these cases, none of them showed on admission or subsequently developed clinical evidence of diphtheria. Though they were not isolated in any way they did not appear to convey diphtheria to others. They all made a good recovery.

In considering the above results, three points of interest appear:

1. Bacilli resembling the diphtheria bacillus in morphology were found on admission in the throats of only 1.2 per cent. of our cases.

2. Only a minority of these cases presented clinical evidence of diphtheria.

3. The presence of Hoffman's bacillus in the fauces did not appear to play any part in the causation of diphtheria.

We will now pass to the consideration of the second question which we propounded—namely, how far it is possible to prevent post-scarlatinal diphtheria by the method adopted. For this purpose we will tabulate the annual admissions into the London Fever Hospital of cases of scarlet fever and also of diphtheria during the last six years, showing the incidence of post-scarlatinal diphtheria in each period. A larger number of cases appear in this table than we have hitherto mentioned. This is due to the inclusion in it of Dr. Sidney Phillips' cases, which were in the same wards, and were isolated in the same way as ours when showing suspicious cultivations. We are indebted to the kindness of Dr. Sidney Phillips for permission to refer to and include his cases. We add, for comparison with our figures, similar data extracted from the reports of the Metropolitan Asylums Board:

THE LONDON FEVER HOSPITAL.

Year.	Scarlet Fever Admissions.	Diphtheria Admissions.	Post-scarlatinal Diphtheria.
1893	764	5	4 = 0.52 per cent.
1894	294	25	1 = 0.34 "
1895	516	52	14 = 2.71 "
1896	637	65*	3 = 0.47 "
1897	431	45	1 = 0.23 "
1898	325	40	0 = 0 —

* All admitted after the month of March.

THE METROPOLITAN ASYLUMS BOARD.

Year.	Scarlet Fever Admissions.	Diphtheria Admissions.	Post-scarlatinal Diphtheria.
1893	14,548	2,848	204 = 1.40 per cent.
1894	11,598	3,666	220 = 1.90 "
1895	11,271	3,635	408 = 3.62 "
1896	15,176	4,508	705 = 4.64 "
1897	15,241	5,673	796 = 5.22 "
1898	Statistics not yet published.	—	—

It will be observed from these two tables that the percentage of post-scarlatinal diphtheria at the London Fever Hospital has been uniformly lower than that at the hospitals of the Asylums Board. In both tables, however, a conspicuous increase in the percentage of post-scarlatinal diphtheria appears in 1895. Whereas, however, in the Asylums Board hospitals this percentage continues to increase in 1896 and 1897, in the London Fever Hospital table it suddenly falls in 1896, and continues to diminish, until in 1898 no case occurs. This difference is rendered more conspicuous when it is pointed out that of the 3 cases in 1896, 2 occurred before the month of March, when our record commences.

Since that date but 2 cases of post-scarlatinal diphtheria have occurred among 1,332 scarlet fever patients admitted, in spite of the admission of 150 cases of diphtheria. Of these 2 cases 1 was isolated on account of rhinorrhea accompanied by the presence of diphtheria bacilli in the nose. In an adjoining room was a case of diphtheria with scarlet fever. It is possible that the mild attack of faucial diphtheria which supervened six weeks after admission was contracted from this source. On the other hand, the throat may have been infected from the nose. For the second case no cause could be assigned. In neither of them were bacilli found on admission. Both made good recovery.

The first of these two patients was included in a series of 51 cases of post-scarlatinal rhinitis described by Todd,[5] his observations covering a part of the period included in our report. The leading characteristics of this complaint were as follows: It attacked children only, causing external rhinitis with slight watery discharge. It caused no constitutional disturbances. It was definitely contagious, spreading as rhinitis from child to child, but it did not give rise to faucial or laryngeal diphtheria. A bacillus was isolated by Todd from the noses of these patients, which by all available tests, including that of pathogenicity, was the true diphtheria bacillus, yet he failed in nearly every case to discover any such bacillus in their throats. Were these cases of nasal diphtheria? If so, why did they give rise to rhinitis only and not to faucial diphtheria, and why did not the disease spread beyond the nose? Whatever the explanation, the fact remains that post-scarlatinal faucial diphtheria did not arise. Nevertheless it appears to us that such cases of rhinitis might be the starting point of faucial diphtheria, and that in future they will require careful supervision.

General Conclusions.

We believe that post-scarlatinal diphtheria is due to the introduction of unrecognized cases of diphtheria into the scarlet fever wards, and that this can only be obviated by systematic bacteriological examinations of all cases on admission, and by separation of those in whose throats diphtheria bacilli are found. If Hoffman's bacillus, which we believe to have no direct causal connection with

diphtheria, be excluded, the number of such cases, though probably greater among patients more liable to double infection than ours, should not be beyond the isolation resources of most fever hospitals; moreover, absolute isolation does not appear to be essential. At any rate, we consider that the method deserves trial on a larger scale.

Further, we think that some supervision of cases of rhinitis with diphtheria bacilli in the nose should be practised, such as keeping them in bed while the discharge continues; for though these cases do not appear to have given rise at the London Fever Hospital to faucial or laryngeal diphtheria, yet such an occurrence is quite possible.

REFERENCES.—[1]*Münch. med. Woch.*, Bd. 42, 1896. [2]*Epidem. Soc. Trans.*, 1896. [3]*Zeit. f. Hyg. und Infections-Krankheiten*, Band xxix, Hft. 2, 1898. [4]*Met. Asylums Board's Report*, 1895. [5]*Lancet*, May 25th, 1898.

W. H. P.

Professional Secrecy in English Law.—A memorandum of the law of England relating to the obligation of medical practitioners with regard to professional secrecy has been prepared by Mr. Muir Mackenzie, at the request of the General Medical Council. It is declared that "a medical man not only may, but must, if necessary, violate professional confidences when answering questions material to an issue in a court of law." The law of New York is directly contrary to the English law in this respect.

Heat in Hemoptysis.—The literature of hemoptysis is voluminous, a remark that applies to a number of equally urgent symptomatic emergencies, but it has hardly yet attained the dignity of an exact and trustworthy therapeutic gospel. In other words, the logical chain has been weak in one or more of its links, and has not withstood the stream of practical experience. To take an illustration of the lack of knowledge of principle that underlies many of the physician's procedures, take that of the application of cold to the chest, a step that has been time out of mind the sheet-anchor of the medical attendant. What more simple, what more reassuring to the patient and his friends, and we may now add in the light of modern wisdom what more ridiculous and ineffectual measure could be undertaken? Any candid medical practitioner who has had a fairly wide experience of hemoptysis will probably admit at once that he can do little in severe cases even in the way of palliation. The stock remedies are gallic acid, styptics and ergot internally, with hypodermic injections of morphia, rest and the external application of ice. Sooth to say, it is not unlikely that we hitherto have all been wrong, and the proper thing is an application to the chest as hot as the patient can bear it. At any rate, many practical men do not hesitate to say that ice never yet stopped a bad hemoptysis. As the point is one of considerable interest and importance, some of our readers might be good enough to favor us with their particular views and experiences upon the subject.—*Med. Press and Cir.*

Selected Articles.

THE BEDSTEAD AS AN IMPORTANT FACTOR IN DOMESTIC HYGIENE AND COMFORT.

BY LAWSON TAIT, F.R.C.S., M.D., LL.D., ETC.

THERE is no article in ordinary life-long use with which we are so closely related, with which we spend so much of our time, which we so often occupy with such affectionate readiness and leave with such poignant regret as our bedstead. Yet how little care is given, certainly but little was given in the past, to the principles of its construction and use, so that personally I feel that between the primitive Scotch box-bed filled with a good elastic truss of well-dried heather and one of Whitfield's Ideal Bedsteads, introduced by that firm with my own name attached as a hospital bedstead, there is nothing to choose. Both of these have excellently well carried out the first necessities of health and comfort, and all between had better be given up.

This is the theme I propose to discuss in the following paper, combining in my narrative of the "bedstead as a factor in sanitation" some advice which I regard as wholesome and much needed in the general management and arrangement of our bedrooms. That this advice will be successful I have little doubt from the widespread revolution caused by a little paper which I wrote some twenty years ago, on "Bedroom Ventilation," out of which have grown the whole army of automatic ventilating and heating arrangements combined with and made into stoves of all kinds, gas and coal-burning. Had I patented the suggestions in that paper, I had now been more than a millionaire, but I do not regret that I gave my plans free to the public as I now give my notions on bedroom management.

It is always useful and full of interest to trace the evolution of any object, whether in the animal frame or in the ordinary use of humanity—and the growth of the bedroom and the bedstead have their interest like other things. From the time of the cave-dwellers through the various stages of savage and nomad life, the dwelling space was used for all purposes in common, and it is only after the wandering hunter has achieved fixity of tenure and residence that he discovers the advisability of shutting off part of his house as a sleeping place. This becomes easier as he learns how to use the more permanent kinds of building materials, timber,

brick and stone; and as his skill grows, so does the fixity of possession and its continuity by descent, so that it comes practically that the bedroom appears with the pursuit of land tenure and culture and the erection of permanent houses. This brings us into the midst of advanced civilization in which in Britain probably we were left by the Romans, the construction of whose bedrooms and bedsteads is quite well known, though neither were well adapted for permanent use in such a climate as ours. Even with the help of the efficient hypocaust the comfort of both in Britain must have been difficult to maintain, and when the skilled Italian artificers disappeared from our country in the fifth century we probably went back to the bundle of ling and its thin covering.

The Normans brought back a better kind of domestic building, and when the settlement of the country towards the end of the fifteenth century made domestic architecture possible for others than the Norman barons, the English yeoman adopted for his buildings the only material at his hand, the rough oak of his native woods and the dab and wattle still seen in the interstices of the beams till this day, formed from the osiers of the meadows and the mud from the river side. The Norman nobility, as we know from old drawings and tapestry representations, used the single bedsteads as used on the Continent now. The castles in which they lived were massively built of stone by guilds of imported masons. The floors were level and the doors could be made quite square, and fitted fairly well. The windows were provided in the main rooms with well-fixed glass, and at other times with well-made oaken shutters, so that the chambers of a Norman, with their large fireplaces abundantly supplied with wood fuel, must have been exceedingly comfortable habitations. The enormous thickness of their walls secured a very fair uniformity of temperature, and the downfall of cold air from the walls was modified by the hangings of tapestry. For their bedsteads there was no need of hangings, and, so far as I can find out, they did not use them.

But the Saxon farmer had to build his dwelling on lines determined by the curves of the beams at his disposal. The quaint and picturesque twists of a fifteenth century "oak and wattle" building are not the result of "settlement" or bad workmanship, and the inequalities of floor level were determined not by eccentricities on the part of the builder, but were the best he could do with his material. Casements, therefore, and doors could rarely be made true and closely fitting; in fact, they never were till late in the sixteenth century, when we find these beautiful panellings coming into use. "Draughts" in bedrooms must have been therefore the rule and not the exception alike in castle and farmhouse. In the former they arose not only from badly fitting doors and casements, but from the downfall of masses of chilled air from the stone walls, and therefore tapestries were hung round the rooms to keep warm the occupants of the little Norman bedsteads. The farmers could not afford the costly products of the French looms,

and their women had something else to do than spend their time over the tambour frame. Therefore, a smaller apartment was constructed within the bedroom in the shape of a huge four-post bedstead, hung round with curtains, probably of common homespun serge, or the box-bed of the north was employed, though no trace of this has been found, so far as I know, south of the Humber. Into such contrivances a whole family must have crowded, probably with the addition of occasional visitors. This, of course, is an occurrence common enough even now in outlying Highland districts, where the box-bed with its complete set of shutters still is in common use. Such a marvel as the Great Bed of Ware, dating certainly from the reign of Henry VII., and perhaps earlier, measuring twelve feet square, represents the best instance of the "room within a room" which was still in use in the vast majority of well-to-do houses until the beginning of the series of "Great International Exhibitions." Between 1851 and 1861 the French taught us the use of single bedsteads, and we introduced washhand basins and other lavatory arrangements to their notice, whilst the only permanent advantage either of the nations gained from the Crimean War was the use of the bath and the bathroom, taught us by the Russians, widely used now in this country, not so widely in France. The Great Bed of Ware, still preserved in the old timber and wattle Rye House Inn at Hoddisdon, is traditionally said to have accommodated twelve men and their wives, and if we may judge from what Howard records early in this century on the customs in hospitals and workhouses of the Continent and this country as well, in certain places, the statement about our fifteenth century carved oak bedsteads must not be regarded as any exaggeration, and we must not wonder at outbursts of plagues and pestilence arising directly from such causes. Nor does the moral atmosphere arising from such habits require explicit illustration.

The dawn of domestic sanitation, as we now know it, occurred as late as I have already said, and was not fully appreciated till well on in the seventies. Bathrooms began to be added to our homes. We still had grates in our bedrooms, with "closing registers," so as to preserve that delicious "bedroom odor" familiar in all sleeping rooms badly ventilated, and which, in my belief, is the initial stage of the growth of the power of typhus fever. Four-post bedsteads were still in common use, but the curtains had become mere survivals, as seen in a valance along the top rail and hangings about a yard wide at each corner, only sufficient to show what had been their original purport, but quite ineffective to keep off the draught which at that time was an essential feature of an English bedroom. The bed was a huge ungainly object, expensive and uncomfortable, fitted with wooden slats, which resisted all movement and exercised their uncomfortable influence through the thickest of mattresses and feather beds. It was of course made of huge slabs of wood, into the interstices of which vermin sought and obtained access, and once there they could hardly ever be exterminated.

I remember very well that in London it was, one might say, the rule to have vermin in all bedsteads used by the public, as in hotels and lodging houses, and private homes were by no means uniformly free from them. Bugs were the subject of chronic jokes in all humorous writings, whilst at the present advanced period of the development of sanitation they are never alluded to. This is one of the minor improvements, minor in name perhaps only, which have taken place from the persistent arguments in favor of simple cleanliness, which is the gospel of true sanitation.

The first step in the right direction was the introduction of metallic bedsteads, and I remember very well the furor of indignation with which they were met—for nothing annoys an Englishman so much as any interference with his personal habits or belongings. Arguments of the most ridiculous and improper kind were used on all such occasions. Thus I have heard it urged by men who were otherwise sane, that they would not have gas fires because they could not spit in them, and could not poke them. But metal bedsteads have had their way, and now a home furnished with wooden bedsteads is looked upon with suspicion, and a hotel so provided would have but scant favor in popular estimation. But the old form of bedstead was imitated, of course, as closely as cou'd be, just as the old chariot was imitated in our first railway carriages. The old wooden slats were replaced by a cross-work of iron laths, as rigid and uncompromising as their predecessors. The "half tester" continued the survival of curtains, quite useless, but of great comfort to the English housekeeper, as unintelligible as that "blessed word Mesopotamia." Then the bedsteads must be double to hold two people, in spite of the warning lessons bestowed on every household every time a member of it had an attack of illness. The additional comfort obtained by every English man and woman on a visit to the Continent when they found in their bedrooms two snug little single bedsteads placed side by side, made no impression till about ten years ago, when a few venturesome islanders began to dare the breath of scandal by having separate beds. There can be no doubt that this was the reason why the improvement was resented, for to this day the proof of the worst that can be circulated concerning a married couple is that "they occupy separate rooms." Separate beds was and is, to some extent still, regarded as almost as scandalous. Yet in all the best homes in our country each bedroom has attached to it a "dressing room," with a single bed in it, and by this a great increase in comfort and health is attained. Now that we know that consumption is a disease communicated from one to another by contact and breathing the air already breathed by the consumptive, the hygiene precaution of separate beds ought to receive some public recognition. For centuries the Italian physicians have taught the possibility of the disease spreading from husband to wife, and from one person to another, when a tainted and a healthy person have occupied the same bed. There are doubtless many other diseases of which the same is true.

Having now roughly indicated what a bedroom and bedstead should not be, let me try to show what they should be and what they easily may be made, and that this is a matter of real urgency to personal health and comfort must come home to everyone when it is remembered that from the beginning of life to its end we spend more than half our time, and its saddest moments, in our bedrooms and in our beds.

First of all, the capacity of a bedroom should be such as to allow of at least 2,000 cubic feet to each occupant. It should have a flue of at least six inches in clear diameter, and this flue ought not to be in an outside wall, otherwise the chimney is sure to smoke when there is a fire, and it will fail as an upcast shaft at all other times. Nearly all smoky chimneys arise from the fact that they are built in an outside wall which is too thin. The room should, if possible, be warmed by a gas fire, as in this way only can a uniformity of temperature be absolutely maintained, and for very young and very old people nocturnal variations of temperature are extremely dangerous. But a gas fire is not an old coal grate filled with asbestos. A gas fire must be constructed for the use of gas on entirely special principles. The sashes of the windows should fit well and in every instance be provided with plate glass, for the reason that nothing assists the variation of nocturnal temperature like the employment of the common sheet glass of the jerry builder. In going over the magnificent hospital built lately by the Birmingham Guardians for the old and sick, I had only one adverse criticism to make, that the windows, properly placed on both sides of the large wards, had not been provided with plate glass. The difference in price in the two kinds of glass is far more than paid for in the difference in the coal bills incurred within the first two years to keep the wards sufficiently warm, for plate-glass is a most efficient non-conductor of heat, and thin sheet glass is not nearly so efficient.

In all bedrooms the beds (I assume now that in every case the beds are single, and when there are two that they are placed alongside each other) should have their heads close to an inside wall. If this cannot be arranged then the wall and the ceiling for a space corresponding to the bedstead should be covered with a thick serge, loosely attached to the wall, to prevent the cataracts of air chilled by the cold wall falling on the sleeper. The worst of colds are caught in this simple way in the small hours of the morning, and many a fatal senile bronchitis might be saved by this simple expedient. For the same reason the bed must not be placed between a badly fitting window and the flue or the doorway. For ventilation by far the best plan is the familiar plan of making a small place between the window middle bars by raising the lower sash about two inches against a fixed inner sill plate. In this way a gentle stream of fresh air is diffused over the ceiling and displaces the foul air.

For the perfect hygiene of the bedroom there are of course

very many points of importance into which I cannot enter, as that the walls should be double, with at least two and a half inches of something between them, that the outer layer of bricks should be vitreous (pressed Philadelphian), that the doors and windows should fit accurately, and, *most of all*, that the jerry builder should be avoided like poison.

We come now to the important matter of the bedstead, and the only people who require special consideration are those over six feet high, for whom extra length must be provided. Otherwise, no bedstead need be more, and all ought to be six feet three in length, and no bedstead whatever, if constructed on the principles I intend to lay down, need be more than three feet wide, save for a few unfortunate people who are on exhibition. The material, of course, must be some metal, of which the best is steel and the worst is brass. Steel or iron, with the beautiful black enamel now used by Messrs. Whitfield, tastefully set off with a clean white Marcella counterpane, makes the smartest and prettiest bedstead in any room, be it in cottage or palace, and it gives the least trouble; but of course tastes differ in the matter of material. Both head and foot rails ought to be finished in a strong, flat arch, an essential feature for the strength and smartness of the bedstead. For strength and steadiness the head rail must have four or five vertical bars fully secured into its arch and transom, so that the pillows are not pushed out by restless sleepers, whilst the arch of the foot rail, not more than six to eight inches high, should have one horizontal bar to prevent slipping of the mattress. The head rail and upper legs are framed firmly all in one piece, and so with the foot rail and lower legs, whilst the frame of the bedstead is a solid parallelogram and a permanent frame for the "Dominion Wire Mattress," by far the greatest improvement in modern bedstead making.

The adjoining figures will show that this beautiful and unique contrivance is a linkage of steel wire in short pieces, bent and hooked so that every two pieces enclose an elongated parallelogram, save at the margins. If such arrangement were carried over space indefinitely, it would mean that pressure at any point would radiate equally in all directions. But as the frame of the mattress has a length of twice its breadth the diminished longitudinal strain is supplemented by a series of strong spiral steel springs, which serve the additional purpose of giving a point at which detachment of the springs from their frames may be begun should it ever become necessary to remove them, or if detached the process of reattachment ends there. But there never ought to arise any necessity for detaching the springs or wire meshes, for the material supplied by Messrs. Whitfield is so good, the balances of tension so perfectly contrived, that it never varies. I am far beyond the average weight of male mankind, and I have used the same "Lawson Tait Bedstead" for now nearly seventeen years, and the tension of its springs has never varied in the slightest

degree. The spring mesh is tightly secured all around the inside of the firm metal frame, made in one piece, so that the whole bedstead, weighing about 80 lbs., and joined together by beveled key joints or dovetails, comes into pieces by a few smart blows from below upwards delivered on the dovetails on each corner, and for removals these three pieces pack on one another flat, and require only to be tied together. Compare this with the awful work of removing an old-fashioned four-poster.

Another of the faults of the old four-posters was that they were far too high, requiring, as we see in Hablot K. Brown's illustrations of Pickwick, wooden step-ladders by which to mount into the apartment. This fault is continued, to the great discomfort of short people and those who are old, feeble and ill. Measuring the bedsteads of a number of first-class hotels I find that to the upper edge of the mattress, thirty inches and over is the usual height —far too much for any save people much above the average stature. Twenty-four inches to the upper edge of the mattress is far more comfortable for everybody, and the most comfortable bed, in my opinion, in the matter of height, is one on which the occupant can sit with the knee bent at very little more than right angles. For men of average height (5 ft. 8 in.) this will be found to be about 17 inches, or just the height of an ordinary chair, and this should include mattress and bedding. The legs of such a bedstead would not be much more than a foot long, and the great advantage of this height with a width of 36 inches will be found in cases of illness in heaving people who require much moving, and this is the greatest test to which a bedstead can be put, for the attending nurses of the present day average only 5 feet ¾ inches.

It was this matter of the bedstead during illness, especially surgical ailments, which first forced the question of the bedstead and its proper construction upon my notice. In cases of illness the nurses are fearfully handicapped by an old-fashioned high double bedstead. The number of serious illnesses acquired by young women and caused by the strain of lifting heavy and helpless invalids, has been very large in my experience. Therefore, I say, have all your bedsteads single, narrow, low, perfectly rigid, so constructed that they will not sag, and have a stout steel screw-eyelet fixed in the ceiling over the site of every bedstead, into which a cord may be fixed when wanted. This question of sagging of a bedstead is of the greatest importance, and a thoroughly depressed bed-frame is a trouble even to those who are well, whilst in illness it means inevitably that, however well placed, the patient will shortly work round so as to be on his back—always a helpless position, and one that often contributes greatly to the discomfort of a patient and sometimes even to his death. I have completely cured sagging by throwing the top and bottom rails of the mattress-frame into a widely-opened arch, so that when occupied the whole wire mattress is slightly arched upwards from side to side, and when occupied by an average weight the mesh is exactly

flat. Turning from side to side in such a bed is a matter of ease for even the feeblest, and the inevitable turning on the back is entirely prevented. The ring in the ceiling, which is no eyesore in the private bedroom, assists most materially in the movement of those even who are in acute illness and who without it would hardly move at all, and would require every movement to be made for them by nurses. We never know when a bedstead may have to bear a bed of illness, therefore the ring should have a very common presence in the bedroom ceilings.

Messrs. Whitfield have brought the "Lawson Tait Bedstead" to what I think is final perfection by the india rubber foot pad. It prevents noise and jarring when the bed has to be moved, and it is an enormous advantage over the old caster which was noisy, frequently came off, and these were a source of much trouble. Thus the caster whether off or on was a potent factor for the marking and disfiguring of a well-faced floor.—*The Birmingham Medical Review.*

TWO MONTHS IN THE MEDICAL WARDS OF THE NEW YORK POST-GRADUATE HOSPITAL.

BY WILLIAM HENRY PORTER, M.D.,

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I.—Anemia.

The two cases here reported are chiefly interesting from the dissimilarity of their causation.

The first case gives the following history:

Miss M. S., aged 19; single; dressmaker. Her mother died of phthisis, and her father is now being treated for a lung trouble. Springing from such stock, it is not strange that this patient should give the history of all her life being weak and delicate. She began to menstruate at sixteen, and has since been regular every four weeks. Her present trouble began about ten months before she was admitted to the hospital, which was on January 6th. Her first symptom was pain in the stomach after eating; the digestive disturbance gradually increased associated with increasing weakness. This was followed by fainting spells. Her occupation was naturally very confining, and she took but little out-of-door exercise. There has also been a condition of obstinate constipation. For three months prior to admission to the hospital the menses have been irregular, accompanied by more pain, and a more profuse flow of lighter-colored fluid instead of the ordinary sanguineous discharge. For three weeks before admission she had been in bed a great part of the time, complaining of quite severe gastric pain, especially after eating, but without vomiting. Sleeps poorly.

Physical examination gave practically a negative result, so far as the organs contained in the chest cavity were concerned. The abdomen was both tympanitic and dull, some portions of the alimentary canal being filled with gas, while other regions contained fecal matter. Ausculation gave but little evidence of vermicular movements on the part of the intestinal canal.

Examination of the blood at the time of admission to the hospital gave 2,512,000 red corpuscles to the cb. m.m., and 55 per cent. hemoglobin (Gower's) in the blood.

The pulse and temperature ranged but little above the normal. The urine in this case presented no marked abnormal appearances.

The second case is that of a female:

Mrs. A. G., aged 34, married; admitted March 14th, 1899.

The family history was unimportant. She has always been fairly well, but had the usual diseases of childhood. Has had nine children and two miscarriages, the first fifteen months ago, and the second twelve months later. Since the last miscarriage she has been flowing almost continuously. Has had severe headaches. Two weeks prior to admission she had what was called pleurisy in the left side. About this time the feet began to swell, and she complained of quite severe pain in the smaller joints of the feet.

The uterus was curetted and packed with gauze. This was done under the local influence of cocaine, as Dr. Dudley considered her condition so desperate that he did not think it safe to give an anesthetic.

When first seen by Dr. Porter, which was shortly after the operation, the patient was suffering greatly from dyspnea, unable to lie down, was very anemic, pulse about 100; temperature 100.8° F. The lower extremities were edematous, and there was marked pain and swelling about the metatarso-phalangeal joints of the great toes. There was also marked periosteal edema and tenderness over the sternum and crests of the tibia.

The temperature in this case appeared to be due more directly to a condition of intestinal fermentation rather than to the local uterine condition, and rapidly subsided under a mercurial purge, and attention to the diet and digestion.

The urine, while in the hospital, had a sp. gr. varying between 1,022 and 1,030; was highly acid; at times contained a trace of albumen and a few hyaline and granular casts. Occasionally an epithelial cast was found.

Before taking up the treatment of these two cases in detail it may be well to consider first the natural methods by which hemoglobin is normally produced in the system, and the etiological factors that enter into the destruction of the hemoglobin, or prevent its formation in sufficient quantity to fully replace its natural disintegration.

It is becoming generally recognized that both iron and manganese cannot be absorbed from the healthy mucous membrane of the intestine and carried into the blood. The proof of this is absolute

with manganese, as this metal is not a part of the normal body, and is one of the inorganic substances that can easily be traced. It is equally so with the iron, but cannot be so readily demonstrated from the fact that iron is one of the constituents of the body tissue. Now iron cannot be supplied to the system from the inorganic world. This is further true by virtue of the law that synthesis is confined exclusively to vegetable life, while the chemistry of animal life is analytic destruction or oxidation reduction. Hence all the anabolic processes of the animal kingdom are simply due to the mechanical multiplication of the molecules and not to synthetic construction.

With these simple laws established and confined exclusively in their working to the proper domain in all the phenomena that are observed in both vegetable and animal life, much of the confusion experienced in the explanation of these intricate problems in connection with living things is dispersed.

This much conceded, it becomes necessary to look for the primary source of all material required in the construction of the animal organism, not in the animal kingdom, but in the earth and its vegetable and animal products; the latter coming, as it were, out of the former, but always as the result of an isomeric or an oxidation reduction process. In almost every instance the latter is the method pursued. Especially is this true in reference to the primary source of the iron and phosphorus-bearing compounds, which are necessary for the construction of the hemoglobin of the red blood corpuscles, and for the lecithin of the nerve tissue.

This iron and phosphorus-bearing compound has been found to exist in connection with the nuclei of the cells, as found in both animal and vegetable life, in the form of a substance that has received the name nucleoalbumin. It was so named because it was first discovered in connection with the nuclei of cell life, and also because it was found to be composed largely of albuminous material. Yet nucleoalbumin differs from the proteid bodies in general, in that it contains an atom of iron and phosphorus in its composition. Nucleoalbumin is found as a common constituent of all cells, both in the vegetable and animal kingdoms. It is far more abundant, however, in the former than it is in the latter class, and it is especially abundant in the green vegetables and in the legumins. Nucleoalbumin, like many others of the complex proteid class, is variously described by different investigators. A careful analysis of all these observations, however, indicates that nucleoalbumin is a very complex and often polymeric substance, which, in its essential characteristics, more closely resembles the globulin series of the proteid bodies than any of the other proteids. It differs absolutely from the globulins, however, in this, that it contains in its complex composition both iron and phosphorus, neither of which is found to be present in a pure globulin.

The nucleoalbumin formed in the cells of the vegetable kingdom is unquestionably the direct anabolic product of the synthetic processes that constitute chemical action as it is observed in plant

life. It, like the proteid of the vegetable kingdom, is a highly complex polymeric compound; while the nucleoalbumin derived from the animal kingdom, like the proteid of animal origin, is always less complex or monomeric in its construction.

When this complex vegetable nucleoalbumin is taken into the stomach in the form of food, it, like the proteid of vegetable origin, is acted upon by the digestive ferments and rendered less complex, being by this process so transformed that it can be taken up from the alimentary canal by the epithelial cells that go to form the mucous lining. In its passage through these cells, or after it has entered into the system, it becomes, in part at least, isomerically transformed into animal nucleoalbumin, and finally appears as such in the milk, egg and various structures of the body. Other portions pass up to the liver and are there oxidized in the hepatic cells. In this manner the nucleoalbumin is split up in accordance with the analytic theory of animal chemistry, thus forming the simpler forms of compounds, such as hemoglobin and lecithin, water, carbon-dioxide, etc., all of which are well known and easily recognizable substances. It is also highly probable that in this oxidation process the polymeric molecule gives place to the less complex or monomeric form of structure, thus explaining the formation of the simpler form of nucleoalbumin as it is found in the animal kingdom. The hemoglobin contains the iron that previously existed in the nucleoalbumin, and enters into the composition of the red blood corpuscles, thus giving to them their continuous supply of hemoglobin as rapidly as it is exhausted in its natural metabolic destruction. The lecithin contains the phosphorus, and it enters into the nerve tissue, either as one of the component parts of this structure or as an oxidizable food product for the direct stimulation of the nerve cells.

By this method of formation, the first logical explanation is given for the production of hemoglobin and lecithin in the physiological economy. Both of these substances have been developed in perfect harmony with the common laws of chemistry, as they are known to exist in connection with both vegetable and animal life. Their formation has been explained also, without introducing a number of highly speculative problems, all of which rest on absolute uncertainty.

It will be noticed also in this study of the nucleoalbumins, that while they are more abundant in the vegetable than in the animal kingdom, they are more complex in the former, and it is further noticeable that those found in the animal substances can be more easily digested and assimilated. Consequently, those derived from the animal class of foodstuffs are the most economic for the system. When the total quantity of nucleoalbumin in any foodstuff is inadequate for the demands of the system, which is true of most all substances in the animal class, an anemic condition of the animal economy must sooner or later follow the too exclusive use of the animal class. This fact is noticeable especially in the infant, in which the

only diet is milk. And as the milk is defective in the proper quantity of nucleoalbumin, as the child advances from month to month it becomes anemic; hence the necessity for the addition of the animal class of foodstuffs as soon as they can be tolerated and utilized by the digestive organs. This different quantity of nucleoalbumin in the animal class of foodstuffs is one of the conclusive proofs that the vegetable class must be added to the animal to secure the highest grade of nutrition. On the other hand, this line of argument does not prove that the vegetable class of foodstuffs is the most valuable. But to the contrary, it demonstrates conclusively that the vegetable class is the most difficult to digest, and, in consequence, may not yield a sufficient amount of proteid material to satisfy the demands of the system. Therefore, to secure the highest grade of nutrition, the two classes must be perfectly adjusted both as regards quantity and quality.

The theory just outlined, briefly summed up, is as follows: The intake and output of iron by the system is, comparatively speaking, very small; the iron in organic combination, commonly found in the foodstuffs as nucleoalbumin, is the only source of iron supply to the system for the formation of hemoglobin; the amount of nucleoalbumin as ordinarily contained in a well regulated mixed diet is far in excess of the requirements of the system daily.

If, now, for any reason, the nucleoalbumin is decomposed in its passage through the alimentary canal before it is absorbed, then the system is deprived of the regular supply of this hemoglobin-forming compound, and the condition known as anemia will, of necessity, supervene.

On the other hand, if there is a too rapid escape of the hemoglobin from the body, as occurs in connection with hemorrhage, as illustrated in the second case, the loss of hemoglobin will be more rapid than it can be reproduced by the physiological laws already outlined. Consequently the symptoms, as here detailed, will be produced.

The first patient represents a class of cases that naturally come under the heading of medical anemias. They are usually due to three distinct causes, and may be classified:

First, anemia, as produced by taking too little food, or that which is deficient in the nucleoalbumin.

Second, anemia that is due to the introduction of sulphur compounds with the food, or due to digestive disturbances in which the sulphur compounds are produced so abundantly in the intestine that the supply of iron in the nucleoalbumin is completely exhausted in satisfying the sulphur compounds with iron.

(In either instance the natural supply of nucleoalbumin, out of which hemoglobin can be formed, is destroyed or prevented from gaining access to the circulation and hepatic cells.

Third, that class of cases of anemia in which there is not necessarily any diminution in the foodstuffs, either as regards quantity or quality, or any excess of sulphur compounds in the

alimentary canal to destroy the nucleoalbumin contained in the food supplied, where there is a disturbance in the chemico-physiological activity of the system, so that none of the foodstuffs, and particularly the nucleoalbumin, can be oxidized and utilized properly by the animal economy. This condition is found in all the infectious diseases, and when microbic and toxic agents are introduced into the system. It occurs in all acute and chronic diseases of the circulatory and pulmonary system; in hepatic and renal affections. This condition is also encountered in the uric acid and oxalic acid conditions, in neurasthenia, rheumatism, diabetes, pernicious anemia, etc., etc.

In the class in which some positive toxic agents are introduced into the system, the poisonous compound not only causes an arrest of the normal metabolism, but it often produces a rapid disintegration of the hemoglobin, so that the anemia is due to both non-formation of hemoglobin and an abnormally rapid destruction of that substance. The same prevention of formation and concomitant destruction of hemoglobin is especially well marked in pernicious anemia. This double action is much less marked in the more chronic forms of imperfect metabolism and states of suboxidation.

All that is required in the first form of anemia—*i.e.*, that due to insufficient ingestion of foodstuffs—is a perfect adjustment of the diet as regards quantity and quality, and the kind of foodstuffs that can be digested and assimilated best by each special case. Remedies which will assist the enfeebled digestion, improve a weak circulation, and regulate an irregularly or imperfectly acting nervous system must be administered when required; and special attention must be given to seuring the proper amount of outdoor exercise.

To give this class of cases the salts of iron—*i.e.*, assuming that there are no sulphur compounds in the alimentary canal to destroy the nucleoalbumin before it can reach the blood-stream—would, with our present knowledge of the action of the iron compounds and the natural method of formation of hemoglobin, be useless. They might prove damaging to the system by disturbing the digestive function.

The second class of anemia is best treated by the same careful attention to the diet, the digestion, and the circulatory and nervous systems, and to securing the proper amount of outdoor exercise.

It is at this point that we discover the true explanation for the action and utility of the iron salts. So far as the possibility of the absorption of iron is concerned, it does not make any difference which one of the iron salts is introduced into the stomach, none of them is absorbed. If they act at all it is by their being acted upon in the stomach by the hydrochloric acid, and there converted into a chloride of iron. This is true alike of all the inorganic and the many so-called organic proportions, excepting possibly a part of the nucleoalbumin contained in hemaboloids, which then follows the same course as that of the foodstuffs.

The absolute non-absorbability of the iron appears to be rather one of the wise provisions of Nature, by which toxic compounds in general are kept out of the system, unless they chance to gain access to the lymphatic or circulatory channels through a break in the continuity of the skin or mucous membranes. Ferric oxide, in combination with the organic acids, behaves in the same manner as the inorganic salts of iron.

The albuminates of iron, so-called, which, however, do not seem to be true chemical compounds, but simply variable and loose mechanical mixtures of iron and some proteid substance, are probably split up in the stomach by the gastric juice, with the formation of a chloride and a proteid body. Even if this is not the case, there is no evidence to show that they resemble the polymeric nucleoalbumin, or that they can be utilized by the system in a similar manner.

Thus we find that one by one all the vaunted preparations of iron fall into the same class, so far as their utilization by the physiological economy is concerned. The iron in them all follows the same course in its passage through the alimentary canal; the contained iron, be it an inorganic or a so-called organic compound, unless we are dealing with the nucleoalbumin as constructed by Nature, and even a part of this compound must be converted into a chloride by the action of the hydrochloric acid contained in the gastric juice before it can be utilized. This accomplished, the chlorides, and possibly all the soluble forms of iron, are quickly attacked by the sulphur compounds, and the iron; instead of entering the blood, appears in the feces in the form of a black sulphide of iron, Hence the black stools following the exhibition of any or all preparations of iron.

From the physiological and the experimental data at our command, it appears quite conclusively proved that none of the iron salts can be absorbed and utilized by the system. It is equally true that the only method by which iron is supplied to the system and utilized for the construction of hemoglobin, is by the absorption and oxidation reduction of the nucleoalbumin that is found in the foodstuffs.

The first case here reported is one which, from the clinical and therapeutic standpoint, demonstrates conclusively the reliability of iron therapeutics. From our present knowledge it is further clear why it should be so. We have in this patient one who has been closely confined, poorly nourished, constipated, and suffering from intestinal indigestion with the formation of sulphur compounds that have progressively destroyed the nucleoalbumin of the food, thus preventing the normal formation of hemoglobin until a profound condition of anemia has been established, commonly known as chlorosis, called by Sir Andrew Clark, constipation anemia. The treatment in this case has been practically, rest, with out-of-door exercise, a good, plain, nutritious diet, removal of the constipation by suitable laxatives, and the free administration of iron.

It is in this class of cases that the regular administration of the chloride of iron is indicated. This preparation is emphasized in preference to all other forms, because it most rapidly satisfies the sulphur compounds that are destroying the nucleoalbumin and cutting off the natural iron supply, and also because it does not tax the gastric secretion to convert it into a chloride in its passage through the stomach. If any other iron preparation is used to meet the indication in these cases it must be such a one as can be easily converted into a chloride, or that will reach the intestine in a soluble form; otherwise the sulphur will not act upon it, and it will consequently be a useless drug. The only reason, from a practical and scientific standpoint, that can be urged logically as justifying the use of any other preparation, aside from the chloride, excepting possibly the hemaboloids, which, however, is a solution of nucleoalbumin, and should be classed more as a concentrated food than as an iron preparation, is the fact that the latter may disturb the digestive functions, and prevent the utilization of the normal foodstuffs. When this is the case some one of the other preparations of iron may be well borne by the stomach, and thus act more efficaciously.

The chloride, however, strikes more directly at the cause of the anemia than any other preparation.

The results have been quite satisfactory under the influence of the chloride, the blood count on February 8th, 1899, being 3,600,000 to the cb. m.m., and the percentage of hemoglobin had risen to seventy-five. On February 25th the blood count was 4,040,000, the percentage of hemoglobin being the same as at the last examination. On March 7th, 1899, the blood count was 4,320,000, the percentage of hemoglobin remaining the same.

The third class of cases requires the same attention to diet and digestion, etc., as the two preceding. Exercise, of course, cannot be taken in all cases, but the best possible supply of pure air should be secured under all circumstances. The inorganic salts of iron, however, are of no avail unless there is an excess of the sulphur compounds in the alimentary canal. Aside from this they are useless, and to administer them is to waste material and money, and in all probability damage an already weakened digestive system. Certain it is they are of no value.

In this class of cases, however, the concentrated solution of nucleoalbumin often proves of great value.

In the second case the most important treatment was to arrest the leakage of hemoglobin from the system, which was done by the curettage and packing. This accomplished, the surgical aspect of the anemia disappeared. While a surgical case, the anemia belonged to the first class, or rather it was a case in which the output from the system of the hemoglobin was greater than the supply of nucleoalbumin, and the ability of the system to convert it into hemoglobin. To this was added a certain amount of intestinal indigestion and sulphur destruction of the nucleoalbumin. This

latter etiological factor was not removed by the surgical operation, hence the need for medical intervention, as well as the surgical. The medical treatment consisted in the use of laxatives, digestive ferments and a salicylic acid mixture.

The latter disturbed the digestive system so much that it had to be suspended. Later it was replaced by the mixed treatment, which was well borne. The iron preparation used in this case was the pilulae ferri compositae. Unfortunately, blood counts were not made in this case, but the improvement was so rapid and marked that it was not needed to demonstrate the rapidly improving condition.

In a case like this, almost any iron preparation would have given brilliant results.

With the removal of the cause of the anemia, attention to the diet and digestion, the use of iron was not absolutely needed, but to satisfy any sulphur compounds that might be formed and aid in retarding recovery it was given. In three weeks the patient was changed from a dying condition to one of rapid and almost complete restoration to health.

II.—Intestinal Indigestion, with Imperfect Hepatic Action.

Under this heading are grouped a number of cases which, while they present quite a variety of symptoms, have as the chief causative factor in producing the many and varied symptoms, an intestinal indigestion associated with a faulty action of the liver; in fact, we may say, a faulty action of the whole physiological economy.

The principal line of treatment in these cases has been dietetic and medicinal, with a view to re-establishing a more nearly normal digestion and assimilation. Under this heading we find a large class of cases, of which no mention is made in the ordinary text-books. Hence, the necessity of taking up the subject in considerable detail, to illustrate how much can be done for these patients if they are correctly apprehended. In fact, a thorough understanding of this one department in the science of medicine is absolutely essential for the most successful treatment of all classes of cases, acute or chronic, medical or surgical. It is in the chronic cases, however, that we observe the most pronounced results from well directed dietetics and therapeutics. In the acute cases and in surgical practice the natural tendency is to recovery or death, within a reasonably short space of time. On the other hand, with the chronic medical case it is not common to have a speedy recovery: but a long-drawn-out miserable condition, which is even worse than death, is the common course, if not arrested by the skill of the therapeutist.—*N.Y. Post-Graduate.*

Dr. Harry Sherman, of San Francisco, has been elected President of the American Orthopedic Association.

Proceedings of Societies.

THE ONTARIO MEDICAL COUNCIL 1899 MEETING.

THE thirty-fourth annual session of the Medical Council of the College of Physicians and Surgeons of Ontario was opened on the afternoon of July 4th, in the hall of the college building, Dr. L. Luton, President, in the chair. The following members were present: Drs. E. J. Barrick, Toronto; J. L. Bray, Chatham; W. Britton, Toronto; L. Brock, Guelph; C. T. Campbell, London; W. W. Dickson, Pembroke; W. J. H. Emory, Toronto; W. B. Geikie, Toronto; S. H. Glasgow, Welland; H. S. Griffin, Hamilton; J. Hanly, Midland; G. Henderson, Strathroy; J. Henry, Orangeville; J. W. Lane, Mallorytown; L. Luton, St. Thomas; A. A. Macdonald, Toronto; V. H. Moore, Toronto; W. H. Moorhouse, London; J. W. McLaughlin, Bowmanville; J. A. Robertson, Stratford; W. F. Roome, London; J. H. Sangster, Port Perry; P. Stuart, Milton; M. Sullivan, Kingston; J. Thorburn, Toronto; T. H. Thornton, Consecon; J. A. Williams, Ingersoll.

Dr. Luton, the retiring President, made the annual address before vacating the chair. He said, amongst other things:

"As this is the only opportunity I shall have of addressing you in my official capacity as President of the Council, I now express my thanks for what I consider the high honor which you conferred upon me. Before proceeding with the session I feel certain that you will join with me in taking the earliest opportunity of expressing regret at the absence of several familiar faces in this chamber. I am pleased, however, to be able to say that during my year of office not one of the members of the Council has passed over to the great majority, and while some are absent to-day with whom we worked in former years, all I can say is that, though we regret it, we welcome the new members to this Council, and I do not think I can pay them or those that are not here any greater compliment than to say I trust the new members will have the interests of the profession and public at heart as much as those who preceded them.

"During my term of office I have endeavored to keep myself in close touch with all that was taking place, and as the curriculum of the Council is most important I beg leave to ask urgent consideration on the part of the Council of the present curriculum, particularly in reference to the fifth year, as I have serious doubts in my mind that the good the Council sought in establishing the fifth year has been secured—in fact, its efficacy in producing better

medical men, as now prescribed, is to me very doubtful. I must here point out to the Council that the fifth year examination entails very much more work on the Board of Examiners, and therefore causes increased expense to the Council. As you are aware, now that the fifth year is being carried on, no provision was made for any revenue to be derived therefrom, the fifth year examination being practically free to the candidate. If I succeed in getting the Council to consider this whole matter I shall feel I have accomplished my purpose. I wish to point out to you in relation to this subject that if interprovincial reciprocal registration is to be brought about—and I think we are all aware of the desirability of securing that condition of affairs in this Dominion—then I think if the fifth year were done away with this much desired object might be more easily accomplished. The examinations were conducted thoroughly and in an efficient manner. I am delighted to be able to inform you that the annual assessment has been responded to by nearly fifteen hundred members of the College paying up all arrears. The Council building shows a fair rental, much like last year, and from the approaching completion of the Court House and city and county buildings I would look for the rents increasing. While on the matter of the building I must remind you that the extension of the mortgage on the building will expire in November next, so that your Building Committee will have to be directed by your counsel to take action as to renewal or otherwise. I think we are near a time when the building can be disposed of to advantage; however, the Property Committee's report will deal more in detail with this matter, and all matters concerning the welfare and position of the institution will be taken up more fully by the different committees.

"Prosecutions have been carried on with considerable vigor, and a large number of cases disposed of, as the prosecutor's report will show. There are a number of letters received by the prosecutor, the registrar and myself that will be attached to his report. You no doubt are aware of an application having been made to the Legislature by Mr. Zielinski, asking to be registered as an eclectic practitioner. It was not deemed necessary to call the Executive or Legislation Committee together. The report of the Executive Committee will deal more fully with the matter. I thank you, gentlemen, for the uniform kindness and assistance which I have received from each and every member of the Council, and retire from the Presidency with the kindliest rccollection and memory of the same." (Applause.)

Dr. Moore moved, seconded by Dr. Moorhouse, that Dr. Roome be elected President for the ensuing year.

In amendment, Dr. Williams, seconded by Dr. Dickson, nominated Dr. Henry for the position.

A vote was taken on the motion, and Dr. Roome was elected by fourteen votes to thirteen.

Dr. Britton was elected Vice-President without opposition.

Dr. Pyne was reappointed Registrar, Dr. H. W. Aikins, Treasurer, and Mr. B. B. Osler, Solicitor.

The Nominating Committee reported the following standing committees for the year:

Registration—Drs. Campbell, Hanly, McLaughlin, Powell Robertson, Sullivan, Stuart.

Rules and Regulations—Drs. Hanly, Lane, Logan, Henry, Barrick.

Finance—Drs. Henderson, Douglas, Griffin, Bray, Glasgow.

Printing—Drs. Barrick, Stuart, Macdonald, Emory, McLaughlin.

Education—Drs. Moorhouse, Dickson, Geikie, Henry, Emory, Brock, Sangster, Moore, Williams.

Property—Drs. Thorburn, Williams, Campbell, Thornton, Dickson.

Complaints—Drs. Griffin, Thorburn, Luton, Macdonald, Douglas.

The report was adopted.

Dr. Barrick gave notice of a motion for the Council to consider as to the disposition of the consumptive poor.

Among the communications read was one from Mr. Zielinski, asking that the Council pay the expenses of his application to the Legislature for a special Act to enable him to practise.

This letter created much merriment, and one member suggested that it be referred to the committee on "cheek."

The Council adjourned till next morning at ten o'clock.

SECOND DAY.

The Council, when it met for its morning session on July 5th, discussed the question of the best means of dealing with tuberculosis among the poor. It seemed to be the opinion that the Council had no power to legislate on the subject, so a resolution was passed calling the attention of the Provincial Legislature and the profession at large to the matter. A proposition to agitate for legislation requiring peddlers of medicine to be licensed, was referred to the Registration Committee.

At the morning's session the first business transacted was the hearing of Dr. Stark in reference to a resolution passed by the County Council of Dundas, Stormont and Glengarry, asking the Medical Council to co-operate in obtaining legislation compelling peddlers of patent medicines, etc., to take out licenses from the treasurers of the counties in which the goods are sold. He explained that the idea was to place travelling quacks under supervision, in the interests of the public, and to have it enacted that every bottle or package of medicine sold by itinerants must bear a label giving the formula of its ingredients. He said that the poor sick in the country were victimized by peddlers, who sold them so-called medicines, which were simply trash.

The matter was referred to the Registration Committee.

Dr. Barrick moved that the following committee be appointed to consider the best means of dealing with consumption among the poor, and providing funds therefor: Drs. Williams, Sangster, Moorhouse, Campbell, Dickson, A. A. Macdonald, Glasgow, Lane, Stuart, Robertson and the mover. He said that this was a most important question, which had been taken up in Parliament and municipal politics, and had been the subject of a congress in Germany. The matter was of national importance and should be dealt with by the Government. He hoped the Council would consent to his motion.

Dr. Moorhouse seconded the motion. He thought they should place themselves on record in regard to a subject which was engaging the attention of the world.

Dr. Moore said that the Council had no power to deal with the subject, and it would be wasting time to discuss it as a body. It cost $62 an hour while the Council was sitting.

Dr. Sangster thought that the Council had a perfect right to express an opinion on a subject which was so specially within the domain of the medical practitioner.

Dr. Thorburn sympathized with the object of the resolution.

Dr. Geikie moved in amendment, that the subject of the best methods of dealing with cases of tuberculous consumption, in all cases, especially among the poor, who can do little or nothing for themselves in the way of treatment, and whose uncared-for cases tend to spread the disease largely, is one to which this Council desires to call the attention of the legislatures and professors of the provinces.

Dr. Barrick said a general expression of opinion would be of little value. He had desired to have the matter carefully considered by a committee and then discussed in Council, so that the decision arrived at would command respect.

Dr. McLaughlin concurred in the view that they had no power to deal with the matter. But if the Council did anything they should do it well.

Dr. Brock said that in 1895 he had called attention to the danger of allowing carbolic acid to be sold without proper labelling. He was ruled out of order on the ground that the Council had no power to deal with the subject. Time had proved that he was right in his note of alarm, for hundreds of people had since been accidentally poisoned by the acid. So far as tuberculosis was concerned, the Council, technically speaking, could not legislate.

Dr. Barrick said the topic was a live one in Toronto itself. It cost the city thousands of dollars to keep in charity the orphans made by this disease, and the Health Board were desirous of getting all the light they could on the subject. The suggestion of a representative body of medical men like the Council must have weight with the public.

After further discussion, Dr. Geikie's amendment was carried, with an addition providing that the resolution be forwarded to the Ontario Government.

Dr. Brock moved that the question of the appointment of examiners and the limiting of the time of such appointment be referred to the Education Committee, with instructions to report.

Dr. McLaughlin said that the matter required consideration. Some of the examiners had occupied their positions for six years, and he thought that other competent men should have a chance of being placed on the Board. He favored a limitation of the time.

Dr. Moorhouse thought that when an examiner was doing his work well he should be allowed to retain his position as long as reasonable.

In the course of the discussion, Dr. Bray said he had received a letter from Dr. Fraser, examiner of Physiology, stating he could no longer hold the position, and must resign.

Dr. Britton testified to the general satisfaction which Dr. Fraser had given as an examiner.

The motion passed.

Dr. Bray, from the Discipline Committee, reported, asking that they be instructed to make an investigation into the charges of unprofessional and disgraceful conduct alleged to have been committed by Drs. R. Sproule, W. L. Hamill, A. J. Stuart and J. H. Watson, all of Toronto.

Upon the President taking the chair in the afternoon a motion by Dr. Campbell, providing that graduates of any recognized colleges in the United States and the British Empire may present themselves for examination at any time, but are not to be registered till they have matriculated in the full curriculum of the College, was referred to the Education Committee.

Dr. McLaughlin moved a resolution of sympathy and condolence with Dr. Logan in his affliction, expressing the hope that he may be sufficiently recovered to resume his seat next session of the Council. Carried.

The Committee on Property reported, recommending that certain repairs be done to the Council building. Negotiations were in progress for its sale and conversion into a technological college. The building, after eleven years' use, was in excellent condition. The revenue of the building had been $3,131, exclusive of taking into account the portion occupied by the Council and its officers.

The Council adjourned till ten o'clock Thursday morning.

THIRD DAY.

The Council transacted a good deal of business during its third day's session, but principally of a routine character. Nearly the whole of the evening session was taken up in establishing the rules of order and procedure to govern meetings of the Council. In the afternoon, the annual fee for members of the profession was fixed at $2.00.

On the reassembling of the Council in the morning, Dr. Bray

introduced a by-law to change the date of the examinations of the College to the third Tuesday in April, thus putting them forward one month.

In Committee of the Whole, Dr. Williams objected that the change would cut down the session from eight months to seven months. The by-law should not pass, at any rate, unless the length of the session were reduced accordingly.

Dr. Britton moved in amendment that the date be the first Tuesday in May. The original proposal, he said, would interfere with the completion of the college course.

After some discussion, the committee rose and asked leave to sit again. The matter will be discussed again on the report of the Educational Committee.

Dr. Brock rose to a question of privilege, and corrected an error in the report of his speech on the examiners in an evening paper.

The Registration Committee reported, endorsing heartily the proposition of the United Counties of Stormont, Dundas and Glengarry, in reference to the regulation and licensing of the sales by peddlers of medicines. They reported adversely to the application of Messrs. Bessey, Gray, Clark and Carter to be replaced on the register. The report was adopted.

Dr. Bray moved the adoption of the Discipline Committee report presented the day previous, authorizing the investigation of charges of unprofessional conduct.

On motion of Dr. Brock, the Registrar was instructed to prepare a full index in connection with the future official reports of the Proceedings.

The first business in the afternoon was the consideration of a motion of Dr. Macdonald, appointing the following committee to deal with the subject of misleading medical advertisements: Drs. Glasgow, McLaughlin, Bray and Robertson. In making the motion, Dr. Macdonald said many of the medical advertisements offered remedies and treatment which would cure all the diseases known. Ignorant and credulous people were defrauded and often seriously injured by neglect to have proper treatment, owing to reliance on these advertisements. The motion was carried.

The Discipline Committee was elected as follows: Drs. Bray, Moore and C. T. Campbell.

Dr. Macdonald moved that the regulations of the curriculum be amended so as to require candidates for license to practise to have administered anesthetics at least five times, under the guidance of an approved practitioner. He pointed out that the administration of anesthetics was so important an operation that students should not be allowed to practise until they had been educated in their proper application.

Dr. McLaughlin said that something should be done to give students a better education in this subject than was at present required. Referred to Education Committee.

Dr. Williams introduced a by-law for levying the annual fee from members of the College.

Dr. McLaughlin said he had always been in favor of paying fees, provided that those who received them were always amenable to the votes of those who paid them. It was a good old principle that those who levied taxes should be responsible to those who were taxed.

Dr. Williams said he supposed the Legislature knew what they were doing when they gave the Council power to levy fees. It was rather late to discuss the abstract principle.

In Committee of the Whole the fee was fixed at $2.00 a year for each member.

The by-law was passed through committee and finally adopted.

Dr. Williams inquired if the past by-law levying a fee was carried out every year. He understood there were many difficulties. Why was the law not enforced?

Dr. Pyne said that up to the present time no names had been erased from the register for non-payment.

Dr. Williams said that the Registrar should be instructed to enforce the law.

Dr. King thought that a distinction should be made in the case of those who had partially paid their arrears.

The matter was allowed to drop.

Dr. McLaughlin introduced a by-law appointing James Carlyle, of Toronto, Auditor of the Council, with a fee of $40. The by-law was adopted.

On motion of Dr. McLaughlin, the Council went into Committee of the Whole on the by-law to amend By-law No. 39. This by-law presented rules and regulations for conducting the proceedings of the Council.

Dr. Williams moved an amendment providing that the officers shall be elected by ballot instead of by open voting.

Dr. McLaughlin said that the members were representative of certain people, and they should vote in such a way that their conduct would be no secret to their constituents. He therefore opposed the amendment. On division, it was lost.

Dr. Thorburn presented the report of the Committee on Infractions of the Medical Act. It stated that sixty-five cases had been prosecuted and investigated; that there had been seventeen convictions; that seven left the country, eight paid fines, and four were sent to jail. Attention was called to the fact that communications from medical men respecting infractions of the Medical Act were always treated confidentially. Several complaints made about alleged unregistered practitioners had proved to refer to fifth-year students, who appeared to be in regular practice.

The Registration Committee reported in favor of admitting to registration Dr. Dickson, and Messrs. J. W. Stanley and George Balmer. The report was adopted. It was decided to have the offices of the Council lighted by electricity. The Council adjourned till ten o'clock next morning.

FOURTH DAY.

The Council at its fourth day's session discussed at some length the advisability of disposing of the College building on Bay Street, on which there had been an average annual tax of more than $3,000. It was finally decided to authorize the Property Committee to take whatever steps they deemed advisable, either to dispose of the property or, if possible, obtain a lower rate of interest on the mortgage. A young student who had been guilty of personation at an examination in 1896 was given permission to present himself at the examinations of the College, it being held that the circumstances justified a lenient course being adopted. Various reports were received or passed.

Upon the opening of business in the morning, Dr. Geikie introduced a resolution respecting interprovincial registration, but, on motion of Dr. Williams, it was held over to await the report of the Registration Committee.

Dr. Bray moved that the Property Committee be instructed to make the best terms possible with regard to the mortgage on the building.

Dr. Sangster thought that the committee should be authorized to go further, and even have the mortgage foreclosed. The building was a white elephant on their hands, and had caused several deficits, in one case amounting to $4,000. They had been led on by elusive hopes that the revenue would increase, but, in view of the enormous building which was to be erected on Teraulay Street, which was to be let out in offices at $50 a year, the revenue would probably decrease.

Dr. Barrick moved that the following words be added to the motion : " And to take such steps as may be advisable in disposing of the property."

Dr. Thorburn deprecated any sacrifice of the property. He thought that, with the continued prosperity of the city, the property would increase in value.

Dr. Thornton said they would always have been in a better position if they never had owned the building. If the Canada Life Company were now to make them a present of the mortgage, they would still be out of pocket.

Dr. Brock said that the building was a necessity to the Council, and even if it cost a little to keep up, it should be retained. The profession were taxed only $2, and was it not appropriate to the dignity and importance of the profession that its representative body should have a worthy home?

Dr. McLaughlin said they had already lost $35,000 on the building, and the sooner they realized the better. No private speculator would have retained the property.

Dr. Moore said that the profession were proud of the building. Were they to retreat to some disgraceful little shed in some back

street? They would be foolish to dispose of the property in a rising market.

The motion as amended was carried.

On motion of Dr. Campbell the following committee was appointed to take cognizance of matters introduced into the Legislature respecting the interests of the profession: Drs. Glasgow, Thorburn, Emory and the mover.

Dr. Harvey called attention to a case of hardship, in which a doctor on the order of a coroner had performed a *post-mortem*. In the meantime the warrant for the inquest had been withdrawn, unknown to the doctor, who was sued by the friends of the deceased, and heavy damages given against him.

The Finance Committee reported a slight improvement in the affairs of the Council for the past year. Nearly all the rooms in the building were now let. The assessment dues uncollected were $7,200. The fees for professional examinations had amounted to $9,170, and the expenditure on same account $2,678. The balance on deposit was $490. The assessment dues collected had been $3,250. The Council meeting of 1898 cost $2,578. The report was adopted.

At the afternoon session a by-law was introduced dealing with the election of the Executive Committee. Dr. Douglas suggested tnat the membership should be increased from three to five. Dr. Williams contended that the committee did not meet often enough nor do enough business to make it important that the membership should be increased. Dr. Powell moved that the matter be postponed to a later stage, and after some discussion this was agreed to.

Dr. Bray introduced a by-law in blank to fix a date for the examinations. The idea was to select an earlier date than at present, but in the course of the discussion it was pointed out that the university and other teaching bodies would be inconvenienced in their present arrangements by the suggested change. Dr. McLaughlin called attention to the fact that it was required that students should attend seventy-five per cent. of the lectures in a course at the colleges, and that it was understood that in some cases certificates were granted when students had attended only from Christmas time. The committee rose without coming to any decision.

The case of Mr. F. J. Doherty, who petitioned to be allowed to have the right of taking the examination of the Council, was then considered. It appears that Mr. Doherty was convicted at the Police Court of personating a student at the examinations of Trinity College in dentistry, and was sentenced to a term in prison therefor. The University of Toronto had since reinstated him in regard to their examinations, it having been shown that at the time he was only seventeen years of age, and had offended to oblige a friend, and was, moreover, unaware of the enormity of his act. Mr. Thomas Mulvey, barrister, was heard on his behalf, and while admitting that the boy had got $15 for what he had done, said that

he had not volunteered to personate at the writing, and that the offence had occurred as far back as 1896. His was the first offence tried under that Act. Having been punished enough, he (Mr. Mulvey) asked that he might be permitted to register as a student and attend the examinations of the Medical Council. Dr. McLaughlin said that as the University of Toronto could afford to forgive the lapse, he thought that the Medical Council could be equally lenient. Dr. Moorhouse expressed a similar opinion, and after some discussion the petition was granted.

Dr. Brock brought forward his motion to instruct the Registrar to strike off the register practitioners who did not pay the annual fee.

Dr. Sangster argued that there was no need for such a resolution, as the Registrar had already power to act, if need be.

Dr. Williams said that many in the profession objected to pay because they knew that others were not compelled to pay. It would be well to let these people know that action would be taken in the case of defaulters without further warning.

Dr. McLaughlin repeated his former objection to the proposition. People who were taxed, he thought, should have a controlling influence over those to whom they paid taxes.

The resolution was ultimately carried by a vote of 18 to 3.

A vote of thanks was passed unanimously to the retiring President, Dr. Luton, for his admirable address.

On the reassembling of the Council, a resolution introduced by Dr. Geikie was passed, expressing sympathy with the family of the late Dr. J. E. Graham, who had passed away in the afternoon, and also regret at the loss the profession had sustained in the death of one of its brightest ornaments and most esteemed members. Drs. Moore, Thorburn and Bray re-echoed the sentiments of the resolution.

By-law 39 was amended so as to fix the day of the meeting of Council on the second Tuesday in June.

Dr. Sangster moved that the number of members of the Executive Committee be increased to five, three of them to be territorial representatives. He said there was a good deal of feeling on the subject among the profession, who thought they should have the same influence on the committee as they had in the Council.

Dr. Williams did not think the rural constituencies wished for any such favored legislation. It was a mistake to think that the college men dominated the Council. The motion was lost. The President, Vice-President and Dr. Henderson were appointed the Executive Committee for the ensuing year.

Dr. Williams presented the report of the Committee on Interprovincial Registration. It stated that at the conference at Quebec between representatives of the medical profession of the various provinces, it was decided to recommend a scheme for the formation of a Dominion Medical Council, when Dominion registration could be obtained under certain conditions, or the passing of an Act by

the Dominion Parliament creating a body with similar functions. It was pointed out incidentally that Dominion registration would make a Canadian practitioner eligible for appointments in the Imperial army and navy medical service. The Council adjourned till ten o'clock Saturday.

FIFTH DAY.

The Ontario Medical Council finished their work of the session on Saturday afternoon, the 8th of July, having worked hard for five days. The principal business transacted was the passing of the report of the Committee on Education, which, among other things, increased the number of lectures to be attended in a course and nominated the new Board of Examiners. The Council expressed approval of the suggested scheme for interprovincial registration, providing it could be secured on equitable terms, and decided not to meddle with the matter of lodge practice,

At the morning session the business opened with the appointment of Drs. Thorburn, Geikie, Emory, Barrick and Macdonald on a committee to confer with the official prosecutor in regard to infractions of the Medical Act.

Dr. Barrick presented an interim report of the Committee on Lodge Contract Practice, asking that they be allowed till next year to make their final report, in order to obtain information from fraternal societies and registered medical practitioners.

Dr. McLaughlin saw no use in communicating with fraternal societies on the subject. It would be stirring up a hornet's nest. The question was dangerously near the border-line between professional and unprofessional conduct when doctors gave their services to lodges for next to nothing.

Dr. Moore said it was not the business of the Council to deal with the matter, which should be left to the medical societies.

Dr. Thorburn recommended that the question be left alone. It was too risky to meddle with it.

Dr. Powell said the only way to offset the evil was to educate the profession by teaching them that by accepting the positions referred to at nominal prices they were cutting their own throats.

Dr. Bray agreed that it was useless to do anything till they convinced the members of the profession that they were fools not to demand regular fees.

Dr. Barrick remarked that for years past they had heard the cry that the Council could do nothing. The committee did not propose legislation, but asked authority to get information, and get opinions, both from the lodge and from the medical standpoint. If necessary, have a conference of both sides, to see if some reasonable settlement could not be arrived at.

Dr. Campbell asked what was the good of obtaining information if they could do nothing with it after they got it. The only infor-

mation of value would be to get the opinions of the profession at large. He moved that the report be laid on the table.

Dr. Bray said the members of the profession had the remedy in their own hands by refusing this lodge practice. The only other remedy was discipline, and who would think of disciplining the large army of lodge doctors ?

Dr. McLaughlin said that the profession expected the Council to do something. But they must leave fraternal societies alone, or they would have 200,000 men in the streets of their towns and villages talking about what the Council was going to do.

Consideration of the report was suspended.

The Education Committee brought up their report recommending that several petitions for matriculation registration be granted, and that others be refused, the reasons being set forth in each case. It was also recommended that a candidate in the recent examinations, mentioned by number only, who had been detected in using a note book, should have his examination fees forfeited and be prohibited from writing again till 1902.

The consideration of the report was continued through the afternoon session. The committee in their proposed amendments to the rules and regulations on the curriculum recommended that the six or eight months' course mentioned in section 2, subsection 4, should consist of not fewer than one hundred lectures instead of fifty, and that each three or four months' course should include fifty. This was amended to read eighty and forty lectures respectively. In the matter of fees the primary were increased from $20 to $30, and the intermediate were made $30.

The fall examinations were fixed for the third Tuesday in November, 1899, at the College in Toronto, and those at the City Hall, Kingston, on the second Tuesday in May, 1900.

The Board of Examiners were appointed as follows:

Dr. H. B. Anderson, Toronto, anatomy, descriptive; Dr. D. E. Mundell, Kingston, theory and practice of medicine; Dr. H. Howitt, Guelph, midwifery, operative and other than operative, and puerperal diseases; Dr. A. Primrose, Toronto, physiology and histology; Dr. J. W. Edgar, Toronto, surgery, operative and other than operative; Dr. William Gunn, Clinton, medical and surgical anatomy; Dr. G. Charters, Toronto, chemistry, theoretical, practical, and toxicology; Dr. J. W. Schooley, Welland, materia medica and pharmacy; Dr. J. H. McLellan, London, medical jurisprudence and sanitary science; Dr. J. Third, Kingston, first assistant examiner to examiner on medicine, diseases of children; Dr. S. H. Fields, Cobourg, second assistant to examiner on medicine, pathology, therapeutics and bacteriology; Dr. E. T. Adams, Toronto, homeopathic examiner.

The report of the Committee on Interprovincial Registration was again taken up. After some discussion the Council declared itself in favor of interprovincial registration on equitable terms, and expressed itself favorably impressed with the scheme for a

Dominion Medical Council. It was recommended that there should be a uniform standard of qualifications, and the following committee was appointed to take any further steps in the matter necessary: Drs. Williams, Dickson, Thorburn and Emory.

The Committee on Lodge Practice was discharged.

On motion of Dr. Moore a vote of thanks was passed to the President, Dr. Roome, for the able and impartial manner in which he had presided over the deliberations of the Council. The President returned thanks in a few felicitous words and the Council adjourned.

CANADIAN MEDICAL ASSOCIATION THIS MONTH GOING TO BE A "HUMMER."

THE thirty-second annual meeting of the Canadian Medical Association will be held at Toronto on Wednesday, Thursday and Friday, the 30th, 31st inst., and September 1st, next.

Through the kindness of the Honorable Minister of Education for Ontario, the building of the Education Department has been placed at the disposal of the Association, and in it the meeting will be held. This building is most centrally situated, as the Church Street cars pass the building, and the Yonge Street line is but one block away.

The programme will be of exceptional interest, and the very important subject of Inter-Provincial Registration will receive full discussion at this meeting.

A number of entertainments have been provided for, including a Reception and Musicale for members and their friends on the first evening; an Afternoon Tea at the Royal Canadian Yacht Club on the Island, and other entertainments.

The Association will be the guests of the City of Toronto on Thursday evening, when members and their friends are invited to attend a Smoking Concert on board one of the large Niagara steamers during a sail of a couple of hours on Lake Ontario; the pyrotechnic display at Exhibition Park will be witnessed from the deck of the vessel. On Friday afternoon the Association will be entertained by the President and Directors of the Toronto Industrial Exposition at Exhibition Park.

There will be an exhibition of instruments, drugs and physicians' supplies in connection with the meeting.

The Committee of Arrangements is making every possible effort to insure a successful meeting, and trusts that there will be a very large attendance. As the meeting is held during the first week of the Industrial Exposition, railway tickets to Toronto and return may be obtained at reduced rates (single fare throughout Ontario). We earnestly urge upon the members of the profession, *to a man*, to turn out to this meeting and make the thirty-second annual gathering by a long way the biggest on record.—[ED.]

PROGRAMME.

The President's Address will be delivered either on the afternoon or on the evening of the first day by Irving H. Cameron.

The address in Surgery will be given by W. B. Coley, of New York.

The address in Medicine by J. T. Fotheringham, of Toronto.

In the Skin Clinic, G. Chambers and A. McPhedran, of Toronto, and A. R. Robinson, of New York, and others will take part.

The following is a partial list of the papers to be read:

"The best method of dealing with the consumptive poor." E. J. Barrick, Toronto.

"Floating kidney simulating disease of the ovaries and tubes." A. Lapthorn Smith, Montreal.

"Observations on adenoids and enlarged tonsils and their removal, with notes of eighty cases in private and hospital practice." D. J. Gibb Wishart, Toronto.

"The methods and ultimate results of operations for halux valgus." N. A. Powell, Toronto.

"Report of a case of abdominal pregnancy." H. Meek, London.

"An experience in formaldehyde disinfection." F. Montizambert, Ottawa.

"An inquiry into the etiology of chronic Bright's disease." A. G. Nicholls, Montreal.

"Operations for extra-uterine gestation." H. H. Chown, Winnipeg.

"Tuberculosis in cattle and its prevention." J. George Adami, Montreal.

"The hospital room in each dwelling." W. J. Telfer, Montreal.

"The treatment of spina bifida." Geo. A. Bingham, Toronto.

"Complications and treatment of fractures of the skull." J. M. Elder, Montreal.

"Recurrent paralysis of the third nerve (Charcot's ophthalmoplegic migraine)." J. W. Sterling, Montreal.

"Tuberculosis and insurance." J. Hunter, Toronto.

"(*a*) Typhoid infection without intestinal lesion; (*b*) Gastroptosis." A. McPhedran, Toronto.

"Some observations on the treatment of cancer." A. R. Robinson, New York.

"Gall-bladder surgery." J. F. W. Ross, Toronto.

"Typhoid epidemics I have met." Wyatt Johnston, Montreal.

"The treatment of cataract." R. A. Reeve, Toronto.

"Christian Science." J. H. Richardson, Toronto.

"Anesthesia by chloroform and ether." Wm. B. Jones, Rochester.

"Treatment of the acute digestive disorders of infancy." A. R. Gordon, Toronto.

"Rhinoliths." Hubert D. Hamilton, Montreal.

"Observations on the relations of the thyroid gland to the uterus." C. R. Dickson, Toronto.

"The question of operation on thyroid tumors." Geo. A. Peters, Toronto.

"A case of malignant disease of the gall-bladder, simulating hydronephrosis (feeding through the gall-bladder for three days)." F. N. G. Starr, Toronto.

Papers have also been promised by A. L. Benedict, Buffalo, J. M. MacCallum and J. J. Mackenzie, of Toronto, and a number of others.

During the meeting, T. G. Roddick, of Montreal, will address the Association on the subject of "Dominion Registration."

The Pathological Museum, in charge of a committee with A. Primrose as chairman, will add much to the interest of the meeting. A great many specimens have been promised, among which are the following:

Lower half of rectum removed for cancer. A. L. Smith, Montreal.

Ectopic pregnancy. H. Meek, London.

Extra-uterine gestation, and others. H. H. Chown, Winnipeg.

Rarer forms of aneurism. Hearts. Calculi. Disease and fractures of bone, and others. J. Geo. Adami, Montreal.

Cast of hand from a case of acromegaly. J. M. MacCallum, Toronto.

Congenital atresia of small intestine. W. B. Jones, Rochester.

Eustrongylus gigas in kidney of mink. Formaldehyde preparations. Dry anatomical preparations. F. N. G. Starr, Toronto.

Obstruction of colon by large gall-stone. Superfœtation, abortion at 4th month, 2 sacs 4 months and 6 weeks. Elevated fracture of skull. Heart and aorta. Fusiform dilatation of latter due to syphilitic endarteritis. Carcinoma of prostate with terminal suppurative cystitis. Columnar-celled carcinoma of stomach. Diffuse infiltration from cardiac to pyloric orifices. Solid ovarian tumor (Filseo-Myo-Sarcoma) twelve pounds, etc. W. T. Connell, Kingston.

Lung—Chronic tuberculosis, Acute miliary, Tubercular broncho-pneumonia, etc. *Female Generative Organs*—Adhesions of pelvic organs, Pyosalpinx, Cysts, Tumors, etc. *Bladder Urinary*—Prostatic changes, Sacculation, Calculi, etc. *Bladder Biliary*—Hydrops, Calculi, etc. *Kidney*—Cirrhotic changes, Cysts, Tumors, Hydronephrosis and Pyonephrosis, Calculi, Tuberculosis, Anomalies and faults. *Œsophagus*—Stricture, New growths. *Stomach*—Ulcer simple, Carcinoma. *Intestine*—Adeno-carcinoma, Colitis, Enteritis chronic, Typhoid changes, Tubercular ulcerations. *Appendices*: *Heart*—Anomalies and developmental faults, Pericarditis, Myocarditis, Myomalachia cordis, Endocarditis, Chronic valvular disease, New growths, Dilation and hypertrophy without valve lesion. *Blood Vessels*—Atheroma, Aneurisms, Ectases, Varicose veins. *Liver*—Abscess, Cirrhotic changes, Venous congestion, Amyloid, Syphilis, New growths. W. Goldie, Toronto.

FINAL EXAMINATIONS, COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

THE following have passed the final examination of the College of Physicians and Surgeons of Ontario: C. C. Armstrong, Kingston; M. B. Alexander, London; G. W. Alexander, Carleton Place; E. C. Ashton, Brantford; J. A. Bauer, Hamilton; E. Baker, Springfield; R. S. Broad, Wellington; C. L. Begg, Orillia; W. Bremner, Minesing; M. D. Baker, Simcoe; W. H. Bennett, Tilsonburg; J. A. Baker, Byron; W. B. Crowe, Trenton; E. G. Cooper, Lanark; R. Crosby, Campbellford; W. N. Connell, Ventnor; F. Cahoon, Picton; J. W. Crane, St. Thomas; J. E. Charlesworth, Hespeler; Colin Campbell, Toronto; J. Colville, Leskard; Jean Cruickshank, Weston; W. Chapel, St. Mary's; M. M. Crawford, Toronto; M. B. Dean, Brighton; H. H. Elliott, Frankville; W. S. Fadden, Denbigh; W. T. Frizell, Kemble; W. D. Ferris, Horning's Mills; C. C. Fissette, Brantford; E. L. Garner, St. Catharines; A. W. Hothan, Staffa; R. Hanley, Kingston; J. G. Hossack, Walsingham; J. S. Hogg, Seaforth; R. Howey, Owen Sound; W. Henderson, Sarnia; H. G. Kemp, Brighton; C. B. Keenan, Ottawa; C. A. Lang, Granton; J. S. Labelle, Windsor; A. Laidlaw, Wilton; T. H. Lawrence, Sheridan; A. S. Lovett, Ayr; J. C. Lindsay, Clinton; J. E. Lundy, Pres-

ton; G. S. Munroe, Glanworth; R. D. Menzies, Lanark; C. A. Morrison, Kingston; J. P. Mitchell, Toronto; F. Moore, Clarksburg; J. W. Messecar, Waterford; J. McGuire, Gananoque; C. W. McLeay, Watford; R. G. McDonald, Sarnia; T. B. McDonald, Ripley; J. R. Nixon, Ashgrove; E. B. Oliver, Ingersoll; J. W. Orme, London; T. D. Orme, London; C. E. O'Connor, Kingston; W. H. Piersol, Toronto; F. Porter, Toronto; C. A. Page, Toronto; S. Paulin, Chesley; G. A. Russell, Seaforth; J. A. Roberts, Jarvis; G. A. Schmidt, Stratford; W. Stephens, Trafalgar; H. W. Spence, Toronto; A. D. Stewart, Toronto; W. Taylor, Dunnville; F. D. Turnbull, Milverton; J. F. Ten Eyck, Grimsby; W. J. Tilman, London; A. R. B. Williamson, Kingston; E. C. Watson, Kingston; J. D. Webster, Toronto; W. H. Woods, Watford.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

THE American Electro-Therapeutic Association will hold its ninth annual meeting at Washington, D.C., September 19, 20 and 21, 1900. The President, Dr. F. B. Bishop, appointed the following Committee of Arrangements:

Drs. D. Percy Hickling, Chairman; Jos. Taber Johnson, G. Lloyd Magruder, Z. T. Sowers, Robert Reyburn, G. Betton Massey, Chas. R. Luce, Elmer Sothoron, Llewellyn Eliot, Clifton Mayfield.

Willard's Hotel has been chosen for the headquarters, and special rates have been made for all interested in this meeting.

Many able papers have been promised, and a very successful scientific meeting is assured. There will be a large and varied exhibition of electro-therapeutic apparatus in Willard's Hall during the meeting of the Association. Willard's Hall is well adapted for this purpose, as it not only adjoins the headquarters, but communicates with it by a corridor; there is also a large entrance directly from the street. The Committee also promises a very pleasant social programme, including a reception by the President of the United States, an excursion to Mt. Vernon, Arlington and Alexandria, a buffet lunch to be served at Alexandria, an evening visit to the Congressional Library to be viewed under electrical illumination. Provisions have also been made to visit the War, State and Navy Department, the United States Treasury and other public buildings.

It is earnestly hoped that every fellow, active, honorary and associate, will be present at this meeting as we want to make it rank among the notable meetings of this Association.

WE are indebted to Mr. Pritchard, of the *Toronto World*, for the use of the cut of the late Dr. J. E. Graham appearing in this issue.

REPORT OF DEATHS FROM ALL CAUSES AND FROM CONTAGIOUS DISEASES IN ONTARIO FOR THE MONTHS OF APRIL AND MAY, 1899.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

APRIL, 1899.

Total Population Reporting.	Total Municipalities Reporting.	Total Deaths Reported.	Rate per 1000 per annum from all causes.	Scarlatina.	Rate per 1,000 per Annum.	Diphtheria.	Rate per 1,000 per Annum.	Measles.	Rate per 1,000 per Annum.	Whooping Cough.	Rate per 1,000 per Annum.	Typhoid.	Rate per 1,000 per Annum.	Tuberculosis.	Rate per 1,000 per Annum.
2,265,286	736	2,073	11	28	0.1	33	0.1	4	.0.02	7	0.03	15	0.08	257	1.3
99%	95%														

MAY, 1899.

2,218,263	720	1,767	10	17	0.09	18	0.09	3	0.01	7	0.03	18	0.09	230	1.2
97%	92%														

Population of Province 2,283,182

Registration Divisions of Province..... 777

The Canadian Journal of Medicine and Surgery

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Orthopedic Surgery—B. E. MCKENZIE, B.A., M.D., Toronto, Surgeon to the Toronto Orthopedic Hospital; Surgeon to the Out-Patient Department, Toronto General Hospital; Assistant Professor of Clinical Surgery, Ontario Medical College for Women; Member of the American Orthopedic Association; and H. P. H. GALLOWAY, M.D., Toronto, Surgeon to the Toronto Orthopedic Hospital; Orthopedic Surgeon, Toronto Western Hospital; Member of the American Orthopedic Association.

Oral Surgery—E. H. ADAMS, M.D., D.D.S., Toronto.

Surgical Pathology—T. H. MANLEY, M.D., New York, Visiting Surgeon to Harlem Hospital, Professor of Surgery, New York School of Clinical Medicine, New York, etc., etc.

Medicine—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; and W. J. WILSON, M.D., Toronto, Physician Toronto Western Hospital.

Clinical Medicine—ALEXANDER MCPHEDRAN, M.D., Professor of Medicine and Clinical Medicine Toronto University; Physician Toronto General Hospital, St. Michael's Hospital, and Victoria Hospital for Sick Children.

Gynæcology and Obstetrics—GEO. T. MCKEOUGH, M.D., M.R.C.S. Eng., Chatham, Ont.; and J. H. LOWE, M.D., Toronto.

Medical Jurisprudence and Toxicology—N. A. POWELL, M.D., Toronto, and W. A. YOUNG, M.D., L.R.C.P. Lond., Toronto.

Mental Diseases—EZRA H. STAFFORD, M.D., Toronto, Resident Physician Toronto Asylum for the Insane.

Public Health and Hygiene—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon Toronto General Hospital; and E. H. ADAMS, M.D., Toronto.

Pharmacology and Therapeutics—A. J. HARRINGTON, M.D., M.R.C.S.Eng., Toronto.

Physiology—A. B. EADIE, M.D., Toronto, Professor of Physiology Woman's Medical College, Toronto.

Pediatrics—AUGUSTA STOWE GULLEN, M.D., Toronto, Professor of Diseases of Children Woman's Medical College, Toronto.

Pathology—W. H. PEPLER, M.D., C.M., Trinity University; Pathologist Hospital for Sick Children, Toronto; Demonstrator of Pathology Trinity Medical College; Physician to Outdoor Department Toronto General Hospital; Surgeon Canadian Pacific R.R., Toronto; and J. J. MACKENZIE, B.A., M.B., Bacteriologist to Ontario Provincial Board of Health.

Laryngology and Rhinology—J. D. THORBURN, M.D., Toronto, Laryngologist and Rhinologist Toronto General Hospital.

Ophthalmology and Otology—J. M. MACCALLUM, M.D., Toronto, Assistant Physician Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Address all Communications, Correspondence, Books, Matter Regarding Advertising, and make all Cheques, Drafts and Post-office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College St., Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

VOL. VI. TORONTO, AUGUST, 1899. NO. 2.

Editorials.

DOES CANADA PRODUCE FERMENTED DRINKS?

IN discussing the questions of temperance and total abstinence before the Seventh International Congress against the abuse of alcoholic drinks, at Paris, April 4th, 1899, Mr. Bayet said that in the northern departments of France hop fields and apple orchards covered large sections of the country, and in the central and southern sections vineyards formed the principal source of wealth,

so that, in his opinion, it would be dangerous to abolish the use of beer, cider and wine, and that, in the true interests of the struggle against alcohol, it would be unwise to push matters with an extreme degree of rigor. In other words, the French agriculturist could not afford to impoverish himself in order to put down alcohol. Commenting on this view *Le Progrès Médical*, of Paris, says: "We think Mr. Bayet speaks the language of good sense and reason. We will not deny that total abstinence is the true remedy for alcoholic patients in hospitals, that in countries such as England, Sweden, Norway and Canada it is easy to preach abstinence, because these countries produce scarcely any fermented drinks. But one must be carried away by a too ardent conviction or completely ignore the state of mind of the French peasant, who, for ages, has actually worshipped his vines, to pretend that a campaign in favor of total abstinence can have the slightest chance of success among us."

We shall not undertake to discuss the argument drawn from interested motives or the influence of ownership of hop fields, barley fields, orchards and vineyards in inducing country people to vote against Prohibition. We simply wish to show that, in the first place, it is incorrect for our French contemporary to say that Canada produces scarcely any fermented drinks; and secondly, that, if there is a smaller production of some of these fermented drinks than the natural fertility of the soil and a favorable climate admit of, that circumstance is explained by the inevitable laws of demand and supply.

In a report published by the Deputy Minister of Agriculture, Ontario, we learn that in 1898 the Ontario vineyards covered 10,-118 acres. It is probable that about half this acreage is devoted to the cultivation of grapes used in the making of wine. A gentleman, who is the president of a wine and vineyard company, writes us as follows: "We are not aware of any exact figures of the quantity of wine made and consumed annually. Our own idea is that there are about 5,000 acres of vineyards in Canada, of which about one-tenth are located on Pelee Island. The annual product would, we think, be about three-quarters of a million gallons. This is practically all produced in Ontario. The wine-producing section might be described by running a line from the head of Lake Ontario to the foot of Lake St. Clair; south of this is the wine-producing section of Canada, and the Catawba, Virginia-seedling and Isabella grapes ripen there, an impossibility anywhere else in Canada."

As our readers know, the yield of apples in Ontario is very large, amounting in 1896 to 55,895,775 bushels, yet, as indicative of the popular distaste for cider, a prominent manufacturer of Ontario sends us the following: "There is no demand for cider, and I do not sell much in any one place, but sell a little in every province in the Dominion."

The statistics of the Canadian Inland Revenue show that for the year ended 30th June, 1898, the total quantity of malt used for brewing amounted to 52,412,502 lbs., and the liquor manufactured, to 19,871,738 gallons. In 1898 all the warehouse malt in Canada, excepting 4.13 per cent., was the product of Canadian fields. Hops are confined to a few sections of Canada, and are generally for local use. In 1898 there were 1,423 acres under hops in Ontario. From the statistics we give of the wine and cider industries our readers will see that these fermented drinks are not produced in large quantities in Canada. That omission, however, does not depend on the infertility of her soil, but is due to the custom of the people, who drink tea or water at their meals instead of wine or cider.

The malt statistics show a considerable output of fermented drinks of that class, and it is quite certain that if the demand for malt liquors were to increase, even enormously, the supply of the native product would quite equal the demand.

Our readers will therefore agree with us, that Canada does produce fermented drinks and large quantities of malt liquors in particular. The supply of all fermented drinks is, however, regulated by the demand, and the demand in Canada is checked by temperance sentiment and the dietetic customs of the people.

J. J. C.

THE STANDARDIZATION OF DRUG EXTRACTS.

THERE can be no doubt that the standardization of important drug extracts is a matter of the first importance to the pharmacist and the physician. An honest pharmacist wishes to furnish what is actually wanted, and a physician, who knows the physiological and clinical effects of a certain preparation, wishes to produce well-defined therapeutic effects by exhibiting it in a given case.

Much has been said of the varying quantities of strychnine in different samples of nux vomica, some containing as much as 3.25, and others as little as 2.03 per cent. of the alkaloid. Naturally,

liquid extracts and tinctures of nux vomica made from such materials will show varying proportions of strychnine. According to the British Pharmacopœia, the liquid extract of nux vomica contains 1½ grains of strychnine in 110 minims (1.5 grammes in 100 cubic centimetres), and in making it the proportion of strychnine in the strong liquid extract is determined by an analytical process. Tincture of nux vomica, which is made from the liquid extract of nux vomica, is also tested by the same assay process, and should yield not less than 0.24, nor more than 0.26 grammes of strychnine corresponding to about ⅛ grain in 1 fluid drachm, or ¼ grain in 110 minims. If well made and weighed, such proportions can be depended on. Where several alkaloids exist in a drug, as in cinchona, each alkaloid should be obtained in a pure state, weighed, and its percentage in a given sample of the drug calculated. There are drugs, however, the strength of which cannot be accurately measured, unless a physiological test is applied. For instance, the strength of a sample of digitalin may be best shown by comparing it with the minimum killing dose of a standard sample of this drug administered to frogs, the tests being then of a quantitative nature. Similar means are used in testing samples of strophanthin. The processes by which these reactions are obtained are explained in a paper read by Dr. Houghton before the American Medical Association, October 22nd, 1898. The essayist showed that great variations could be detected in different samples of strophanthin, one of them being ninety times as strong as another, the others varying between these limits. He also found that the digitalins varied very greatly in strength, though much less than the strophanthins, and said: "The only way that such remedies can be taken with any degree of safety is to have them prepared from stock of known physiological strength."

Ergot is also a drug, the strength of which cannot be accurately determined by a chemical assay. Its oxytocic power may be best determined upon pregnant animals, and its hemostatic action by feeding the drug or extract of ergot to cocks, the result being that the capillaries of the comb and wattles of the fowl became black, and in extreme cases even gangrenous.

Cannabis indica is another drug, the samples of which, as purchased in the market, vary much in strength. It may be administered in the form of an extract to dogs, with the result that a reliable sample will, after the lapse of a normal interval of time, produce a staggering gait, loss of muscular control, reduction of

temperature, etc., followed by insensibility. Physiological tests can also be applied to squill, elaterium, convallaria majalis and to their active derivatives.

There can be no doubt that physiological methods of testing and measuring the strength of drugs, which do not admit of a satisfactory chemical assay, is very reassuring. The exhibition of digitalin to a patient is often viewed with dismay by a practitioner, and the knowledge that a special sample of this derivative has been tested, not merely *in vitro* but *in corpore vili* as well, will induce him to prescribe it, say, in pneumonia, with a reasonable expectation of obtaining a therapeutic effect, and without the fear of a possibly lethal result. J. J. C.

PUERPERAL FEVER IN ONTARIO.

During 1897, in an urban population aggregating 436,996, there were 9,037 births, and 29 deaths from puerperal fever, a rate of mortality from this disease of 0.32 per 1,000 births. Happily, this disease did not cause any mortality in Brantford, Windsor, Chatham and St. Thomas, although, taking these cities in the order given, their birth ratios to 1,000 of population were 30.1, 21.6, 20.7, and 20.0. The highest ratios of mortality from puerperal fever, in proportion to births, were: Guelph, 0.77; Stratford, 0.74; Ottawa, 0.7; Belleville, 0.66; and their respective birth rates to 1,000 living persons were 23.1, 13.2, 27.1 and 14.3. The low birth rates of Stratford and Belleville may be due to insufficient reporting of births, and their true rates for 1897 ought, perhaps, to be put 10 per cent. higher than the quoted figures. If the reporting of births be incomplete, the records of deaths and the causes of death are full enough, and the fact remains that, in some cities of Ontario, the ratio of puerperal fever is relatively high and in others it is nil. Among the larger cities of the urban group used for this statistic, Hamilton makes a good showing with a percentage of .01; London comes next with a percentage of 0.18; Toronto makes a fair third with 0.26.

In the Province 185 deaths are recorded as being due to puerperal fever out of 47,323 births, *i.e.*, one death from puerperal fever to 255 births or, a mortality from this cause of something over one-third of one per cent.

It is generally admitted, nowadays, that puerperal fever is a preventable disease. Modern midwifery aims at conducting an

accouchement with the care devoted to a surgical operation, and can point to long lists of cases brought to a successful issue, even in old lying-in hospitals, where puerperal fever used to be a common cause of death. This vindication of antiseptics in lying-in hospitals should make every physician adopt them in midwifery cases.

As the greatest number of deaths from puerperal fever in 1897 occurred in parts of Ontario, where a large number of births took place without medical assistance, these untoward results of parturition cannot be fairly placed to the credit of the Ontario physician. For instance, in Algoma, where 52.53 per cent. of the births were unattended by physicians, 4 deaths from puerperal fever occurred, while in Brant, where 3.1 per cent. of births had no physician in attendance, there were no deaths from puerperal fever. Again, in Bruce, where no physician was present at 20.72 per cent. of the births, 7 deaths from puerperal fever occurred, while in Wentworth, where 2.68 per cent. of births occurred without the presence of a physician, there were two deaths from puerperal fever.

Then, again, according to population, the cities, in which most obstetric cases fall to the physicians, had less than their share of deaths from puerperal fever, because of the total deaths from this cause 15.67 per cent. occurred in cities, whilst the urban population is 19.13 per cent. of the total population of the Province.

The pure air of the country is, doubtless, a large factor in increasing systemic resistance to infection, and, on the contrary, the impure air of a crowded dwelling or an urban district produces a lessened power of resistance to disease. The statistics we have quoted show, however, that proper medical attendance, even if it is hampered with the often poor, unsanitary conditions of urban life, is safer for a woman in childbed, than pure country air encumbered with the assistance of a neighbor or midwife. J. J. C.

THE MEDICAL COUNCIL AND LODGE PRACTICE.

This year again the question of lodge practice came up for discussion at the session of the Ontario Medical Council. This subject is one which the medical journalists of Canada have thrashed out in past years, and have as a unit proclaimed the decision that the undertaking of lodge practice by medical men is not ethical and is contrary to the best interests of the entire profession.

It may have seemed to the readers of the report of the proceed-

ings of the 1899 session of the Medical Council that the subject of lodge practice was touched upon in an exceedingly desultory and useless fashion—just tickled with a feather to see it was still alive, and then, according to an honored custom, laid upon the table. It may also have seemed that there was a certain amount of trepidation shown by members of the Council who took part in the discussion in case anything were said which "might lead to trouble."

No matter how enthusiastic the medical men may be, and no matter how sincerely the members of the Medical Council may accord with the opinion of the majority of those whom they have the honor to represent, they cannot act ahead of law, and unfortunately the Medical Act, which rules their deliberations, does not at present cover this *bete-noir*, lodge practice. No clause of the Act can be so construed as to permit of a practitioner undertaking lodge work being legally ostracised or accused of "disgraceful" conduct. Herein is where the trouble lies. The Act does not cover "lodge practice," and, therefore, the Medical Council finds itself unable to act.

At this year's session of the Council it was deplored that lodge practice was still indulged in, and a resolution was carried that a circular be sent to lodges, and a communication to all registered practitioners in the Province, requesting the latter to state their position and views in the matter, and suggest a speedy means to do away with this evil.

It seems a crying shame that our Medical Council, whose actions govern us, is powerless to stop that which is by far the greatest evil we, as practitioners, have to put up with, something which is robbing medical men at the present day of hundreds, yes, hundreds of thousands of honestly earned dollars. This question is a far-reaching one, and of the greatest concern to all. At the International Congress on Medical Ethics, to be held in Paris in 1900, many questions allied to this one are "listed" to be discussed by one of the four sections into which the Congress is to be divided. We await with interest to learn in what light lodge practice is regarded by this assembly of the wiseacres of our profession who have scanned a broader horizon.

As far as the immediate present is concerned, *individual action* must be taken, each guilty physician deciding at once to abandon a practice which public opinion and true medical ethics have long declared servile and entirely unbecoming the dignity of a medical

gentleman. Too long have these "lodge doctors" been recognized by the profession, and a sorry addition they are to its ranks, as they stand holding out their cap monkey-like to the crowd, performing their best surgical tricks for the few Queen's heads contemptuously tossed to them by workingmen, who esteem their humbler work so highly that they would "strike" and starve rather than cheapen its value by accepting such a pittance. But the surgical trick has been performed, and the crowd say, "Easy to be ill nowadays, all attendance and medicine for a dollar a year." And the laughter—"the laughter comes after."

W. A. Y.

GRACE HOMEOPATHIC HOSPITAL NO MORE.

"With a view to enlarging the usefulness of Grace Hospital and removing the limitations hitherto existing as merely a homeopathic institution, the trustees have decided to make Grace a general hospital in the fullest sense; and, accordingly, in addition to the already existing homeopathic staff, have established another separate and independent staff, comprising a number of prominent medical men of the city.

"The new staff commence their work on Monday, July 17th, and from that date there will be open daily from 2 p.m. a free dispensary in all departments of medicine and surgery, for the needy poor.

"The private and semi-private wards are open to all registered practitioners of the city.

"The new and allopathic staff is made up of: Medical staff, Drs. Nattress, Stephenson, Pyne and Lynd; surgical staff, Drs. Holford Walker, Sylvester and J. H. Cotton; obstetrician, Dr. J. M. Cotton; outdoor staff, Drs. Clark, Harris, McPherson, Malloch, Coleman and McConnell; bacteriologist, Dr. Westman."

The above is an official announcement handed out by the Secretary of Grace Hospital about two weeks ago, from which it will be seen that that institution has now passed from under the wings of the homeopathic profession and has become a general hospital. "Grace," however, will differ from the other three general hospitals in Toronto in having a staff made up of both allopathic (*i.e.*, scientific) and homeopathic physicians, where they will work side by side, striving with one another as to which form

of medication shall accomplish most for the relief of suffering, and demonstrating to the public generally that "the wolf also shall dwell with the lamb, and the leopard lie down with the kid." The only thing, however, which is troubling us in this connection, is an awful fear that, owing to such close association between the individual members of the two different staffs, in the end a similar mix-up may be the result, as was the case when Dinah, the colored cook, determined to marry Sam Ling, the washee gentleman. On being remonstrated with by her mistress, Dinah replied: "I allows, Missus, dat is de wusst of it, de chillun will done suah be Jews."

W. A. Y.

EDITORIAL NOTES.

Formaldehyd Disinfection in Chicago.—From the *Monthly Bulletin*, May, 1899, published by the Department of Health, Chicago, we learn that formalin gives good results as a disinfectant in that city. For every 1,000 cubic feet of space in the room is suspended, by one edge, an ordinary bed-sheet (2 x 2½ yards), from a line stretched across the middle of the room. Properly sprinkled, this will carry, without dripping, 5 ounces of the 40 per cent. solution of formaldehyd, which is sufficient to disinfect 1,000 cubic feet of space. As many sheets as are necessary are used, hung at equal distances apart. The ordinary, rather coarse, cotton sheet should be used, in order to secure rapid evaporation. The sprinkling is done by means of a spray-producer, devised by Dr. Behm. The sprinkler is perforated by eight minute holes, one-fourth of an inch apart, and almost one millimeter in diameter. The container will hold 22 ounces of formalin, or sufficient for four sheets or 4,000 cubic feet. When all is in readiness in the room, the disinfector ties a damp towel over his mouth and nose, and beginning with the sheet farthest from the door of exit, rapidly sprinkles each sheet on his way out, being careful to spray evenly and no space more than once. The evolution of the gas is so rapid that the air becomes irrespirable in about three minutes, so that quick action is necessary. It has also been found necessary to provide the operators with surgeons' rubber gloves, to protect the hands and wrists from the spray. The room is left closed not less than five hours, after which it is opened up as freely as possible to light and air; the family is instructed to have all woodwork well scrubbed with soap and hot water, or with

the mercuric-chloride solution, and the furniture and other objects thoroughly wiped off with cloths dampened with one part of formalin to twenty parts of water.

Binoxide of Sodium to Purify Air.—Last February, Drs. Laborde and Joubert announced to the Paris Academy of Medicine that they had discovered a substance, the use of which enabled them to renew air which had been vitiated by respiration. They did not, however, publish the nature of their discovery. Recently two other discoverers, Drs. Desgrez and Balthazard have procured a means of renovating impure air by the use of binoxide of sodium, $Na_2 O_2$. Under the influence of water or moist carbon dioxide, the binoxide of sodium breaks up into free oxygen and sodium or carbonate of sodium. All the conditions favorable to the regeneration of vitiated air are therefore realized; expired air being characterized by a lack of oxygen and an excess of watery vapor and carbon dioxide. The two last factors are precisely the active agents, which bring about the disengagement of oxygen. Moreover, the binoxide of sodium and sodium appear to partially destroy certain injurious products of respiration, the nature of which is still very obscure. One gramme of binoxide of sodium can furnish 0.20 of oxygen. Two guinea-pigs were placed under bell-jars of the same size, one of which contained a certain quantity of binoxide of sodium. The witness animal died asphyxiated in four hours, while the other guinea-pig, which was supplied with the binoxide, survived after a ten-hours' trial. This discovery may be utilized in submarine work, principally in the submersable ships, which are so much spoken of nowadays. In order to maintain the balance of the confined air, and the normal air pressure, it would be absolutely necessary to provide a second service of oxygen—say, for instance, a few tubes of liquid oxygen; for the binoxide of sodium absorbs proportionately more carbon oxide than it exhales oxygen and, in one case, the experimenters observed, that the pressure fell a fifth of one atmosphere as a result of this difference in oxygen.

Medical Inspection of Schools.—Why do not some of the junior physicians of Toronto agitate in favor of the systematic medical inspection of the city schools? It will be a long time before the Public School Board and the City Board of Health unite in imploring them to assist in restricting the spread of contagious diseases in city schools by daily medical inspection, and yet every one who gives the matter a moment's thought, will say that a

physician is the right man to recognize the first stage of scarlatina, measles or diphtheria in a child. The prompt separation of such a child from his school companions is the most effective method of lessening the danger to them. Then, again, from the standpoint of medical practice, a physician might as well spend some time in studying the primary stages of contagious diseases in school children as in treating the final stages in children at their own homes; and, what is more, his practical grasp of the work would increase with the systematic daily application of his book knowledge. If he cannot practise in an "emergency hospital," at least he may help the public in important emergencies. He would also be in a position to apply frequent tests to such systems of heating and ventilation as are used in the different schools, and could thus form practical opinions as to their real value.

What the Midwives Think of It.—We are indebted to an article in the *British Medical Journal*, June 17th, 1899, for a peep into the "Transactions of the Midwives' Society," instituted 1897. One midwife, in a paper with the striking title, "Malthusianism, or Tired Ovaries," asserts that "one rarely meets a healthy virgin of forty; and says of the married woman, who resolves to have no more than one or two children, that she falls into a state of health in which 'she complains of nothing in particular, but everything in general, with nervous symptoms predominating.' The most careful examiner will find at the bottom of the whole trouble a pair of tired ovaries and a hungry womb! Now, instead of letting any one make a 'big to do' over a small, granulated spot on the cervix, or a slight leucorrheal discharge, or some minor trouble, and tell her she must have 'local treatment' every third or fourth day, the midwife should be a true woman and tell the woman the truth—that if she will go through pregnancy and lactation she will be cured" (page 18). For a woman nursing a baby and not menstruating, to advise weaning because she is "delicate," is fallacy, for she gains nothing by substituting ovulation for lactation" (page 19).

The Treatment of Ophthalmia Neonatorum and the Provincial Board of Health.—In reference to the discussion on ophthalmia neonatorum, which occurred after the reading of Dr. Burnham's paper, at the annual meeting of the Ontario Medical Association, June 13th and 14th, 1899, Drs. Ryerson and Reeve both advocated dropping one or two drops of a 1 per cent. solution

of nitrate of silver into an infant's eyes shortly after birth. Dr. Reeve also stated that the Provincial Board of Health should give instructions to doctors and maternities, that Credé's, or some other method, be used regularly. This matter was brought before the Provincial Board of Health May 6th, 1897, through a letter from the Canadian Medical Association, asking that ophthalmia neonatorum be placed on the list of communicable diseases, requiring notification. Some discussion followed, and, finally, on motion of Drs. Cassidy and Kitchen, it was resolved as follows: "That the Provincial Board of Health recognizes the communicable nature and also the unfortunate results of ophthalmia neonatorum, and urges upon obstetricians the adoption of proper methods for its prevention; but it does not approve of the opinion that this disease should be added to the list of communicable diseases, requiring notification under the Public Health Act."

Attention! A Doctor Wanted. Reply Quick.—The following is a letter recently received from an influential gentleman in the West. It ought to be a magnificent chance for a young man, as his practice will be ensured. Answers, enclosing stamped envelope, to be addressed to Box 47, CANADIAN JOURNAL OF MEDICINE AND SURGERY, Toronto.—[ED.]

DEAR DOCTOR,—There is an excellent opening here for a medical man. Population 1,500 to 2,000; large railway shops; headquarters for prospectors, mining men, etc. Our doctor lately moved from here to Vancouver, where he thinks bigger money can be had; another poor fellow is nearly paralyzed with cocaine, so *just now* a new man, a *Methodist preferred,* would take a good big share of the work, there being only two other medical men in town. If you know of a *good* young fellow, put us in correspondence.

Yours truly, etc.

Poisoning by Carbolic Acid.—In poisoning by carbolic acid, the drug having been employed by mistake as a vaginal douche, sulphate of sodium, 1 drachm in 16 ounces of water, was successfully used as a local application. This drug might also be tried when the poison has been introduced per os or per rectum. An innocuous sulpho-carbolate of sodium probably results from the combination of carbolic acid with sulphate of sodium. Alcohol, in the form of whiskey, is a good vehicle in which to give an emetic of sulphate of zinc to a person who has swallowed carbolic acid. Dr.

Seneca D. Powell recently reported to the Medical Society of the County of New York three cases of carbolic acid poisoning in which alcohol had been used internally with success.

PERSONALS.

THE Board of Trustees of the Toronto General Hospital held a meeting on the afternoon of July 3rd in the Emergency Hospital to select the men who will compose the house staff for the coming



RESIDENT STAFF, TORONTO GENERAL HOSPITAL, 1899-1900.

STANDING—F. H. Bethune, M.D., C.M.; Norman Farewell, M.D., C.M.; Harold Anderson, B.A., M.B.; Chas. M. Stewart, M.D., C.M.; Thos. Bradley, M.D., C.M.; Geo. A. Sutherland, M.B.

SITTING—John McCrae, B.A., M.B.; W. E. Graham, M.D., C.M.; Chas. O'Rielly, M.D., C.M., Superintendent; D. McGillivray, M.B.; W. C. White, M.B.

year. All of the medical staff were reappointed. The new house staff will be as follows: From Toronto School of Medicine, Dr. H. W. Spence, Toronto; Dr. A. D. Stewart, Toronto; Dr. M. B. Dean, Brighton; Dr. A. A. Shepard, Toronto; Dr. F. Turnbull, Milverton, and Dr. J. A. Roberts as alternative. From Trinity Medical College: Dr. Colin Campbell, Toronto; Dr. G. W. Alexander, Carleton Place; Dr. C. A. Page, Toronto; Dr. G. A. Schmidt, Stratford;

Dr. E. Baker, Simcoe, and Dr. R. S. Broad, alternative. Mr. Walter S. Lee presided at the meeting of the board.

Dr. W. B. Geikie, of Holyrood Villa, Maitland Street, has decided to relinquish active practice, and will, after this date, only take consultation work. We know that, with the Doctor's extensive experience, not only as a practitioner, but a teacher of medicine, he will find that his patients will be pleased indeed to be able still to retain his services when required as a cousultant.

Drs. Jas. Meek and Marcus Kenyon have been appointed professors of Ophthalmology and Otology at the New York School of Clinical Medicine, 328 West 42nd Street, New York. The advertisement of this school will be found on page cxi. of this issue of the Journal.

We are very much pleased to take this opportunity of extending congratulations to Drs. A. H. Garratt, W. H. Harris and Anderson on the result of their recent *difference* with one Davidson, whose residence is on York Street, Toronto.

Dr. Chas. Wilson, of Montreal, and Dr. H. P. H. Galloway, of Toronto, were recently elected active members of the American Orthopedic Association, the next meeting of this Association being held in Washington, D.C., in May of next year.

Drs. E. Baker and E. Shepard of the new house staff of the General Hospital have been appointed to the Emergency branch of that institution.

Dr. Malloch, of College Street, has been appointed one of the Visiting Physicians to the Home for Incurables, Dunn Avenue, Parkdale.

Dr. Ernest Hall, of Victoria, B.C., has decided to remove to Toronto, and will after this reside at 602 Spadina Avenue.

Dr. Ambrose T. Stanton has been appointed resident house surgeon of the Hospital for Sick Children, College Street.

Dr. W. A. Young has been placed upon the consulting staff of the Toronto Home for Incurables.

BIRTH.

Gordon—July 13th, 646 Spadina Avenue, the wife of Dr. D. Gilbert Gordon, of a son.

Medical Miscellany.

A Hospital Automobile.—An automobile ambulance has been presented to a Chicago hospital. The vehicle weighs 1,600 pounds and is capable of a speed of sixteen miles per hour. This is probably the first electric ambulance ever constructed.

The Porous Plaster and Liver Pill Trust is one of the latest combinations to be established. The enormous amounts involved in the transaction is some slight indication of the number of people who put their trust in such preparations.—*Medical Record.*

Photographing the Stomach.—Drs. Lang and Meltzing, of Berlin, have presented an apparatus which they have invented for photographing the interior of the stomach. The tube, the end of which contains a microscopic camera and an electric light, is inserted into the stomach. The negative is about the size of a cherrystone, but it can be enlarged. When the stomach is emptied and filled with air the photograph is made.

An Italian Congress of Hygiene will be held at Como, Italy, during the present year. Professor Bacceli, minister of public instruction, has been named honorary president of the organizing committee, other members of which are Professors Bizzozero and Golgi. An exhibition of hygienic appliances will be held in connection with the congress. The meeting will be made the occasion of a commemoration of Volta.—*Medical Record.*

The Uses of Apomorphine.—Dr. G. B. Malone (*Memphis Medical Monthly*, January) reports the efficient use of apomorphine in spasmodic asthma, the dose being one-twentieth of a grain *per os;* in hysterical convulsions, one-tenth of a grain hypodermically; in the convulsions of childhood, one-twentieth of a grain being given to a child two years and a half old; and finally, in puerperal eclampsia, using an initial dose of one-tenth of a grain.

Removal of Double Fish-hook Lodged in Throat.—A drawing and description of the extraction of a double fish-hook from a boy's throat by Sir R. Christisen in 1819, was recently exhibited at a meeting of the London Society of Laryngology. A ball of ivory was hollowed out on one side to fit over the prongs of the hook. The ball was then pushed down over the hook, which released

the tips, when the whole was drawn out together by the fish-line still fastened to the hook.—*Rev. de Laryng.*, February 18.

The Practice of Medicine in Cuba.—Under the Spanish rule, in order to practise legally in Cuba, it was necessary to hold a diploma of the University of Havana or of some university in Spain, viséd by the proper authority of the district. Those holding foreign diplomas were obliged to pass an examination or to obtain a temporary license. Since the expulsion of the Spaniards, the *Archivos de la Policlinica* complains, many foreigners have come to the island and begun practice without let or hindrance. Our contemporary naturally holds that such an abuse should be stopped by the authorities now governing the country.—*Medical Record.*

Christian Science Moneymaking Methods.—The *Christian Science Weekly* for January 19th contains the following impudent demonstration of its character as a barefaced moneymaking scheme:

"*Christian Science Souvenir Spoons.*

"On each of these most beautiful spoons is a motto in bas-relief, that every person on earth needs to hold in thought. Mother requests that Christian Scientists shall not ask to be informed what this motto is, but each Scientist shall purchase at least one spoon, and those who can afford it, one dozen spoons, that their families may read this motto at every meal, and their guests be made partakers of its simple truth.

"MARY BAKER G. EDDY.

"The above-named spoons are sold by the Christian Science Souvenir Company, Concord, New Hampshire, and will soon be on sale also at the Christian Science reading rooms throughout the country."

Old Age and Exercise.—Exercise is essential to the preservation of health; inactivity is a potent cause of wasting and degeneration. The vigor and equality of the circulation, the functions of the skin, and the aëration of the blood are all prompted by muscular activity which thus keeps up a proper balance and relation between the important organs of the body. In youth the vigor of the system is often so great that if one organ be sluggish, another part will make amends for the deficiency by acting vicariously, and without any consequent damage to itself. In old age the tasks cannot be thus shifted from one organ to another; the work allotted to each sufficiently taxes its strength, and

vicarious action cannot be performed without injury. Hence the importance of maintaining, as far as possible, the equable action of all the bodily organs, so that the share of vital process assigned to each shall be properly accomplished. For this reason exercise is an important part of the conduct of life in old age, but discretion is absolutely necessary. An old man should discover by experience how much exercise he can take without exhausting his powers, and should be careful never to exceed the limit. Old persons are apt to forget that their staying powers are much less than they once were, and that while a walk of two or three miles may prove easy and pleasurable, the addition of a return journey of similar length will seriously overtax the strength.—*Dietetic and Hygienic Gazette.*

The Diagnosis of Functional Heart Murmurs.—Dr Maude E. Abbott (*Montreal Medical Journal*, January) concludes a paper on this subject as follows: "The cases studied illustrate especially the following points: 1. In cases of anemia, pulmonary accentuation is often associated with a pure accidental murmur. 2. Functional murmurs frequently occur when there is neither anemia nor fever. They are then often associated with some other condition suggesting intoxication. 3. Diastolic murmurs have been noted which do not appear to have an organic origin. 4. Although accidental murmurs are generally heard at the base and those of relative mitral insufficiency at the apex, accidental murmurs are probably sometimes heard at the apex (as in moderate anemias, where the murmur may occur at the apex unaccompanied by pulmonary accentuation or cardiac enlargement and disappear after a short time; or in high fevers, where a murmur at the apex is replaced after a few days by one of the pulmonary cartilage of the same character). On the other hand, murmurs produced at the mitral valve are occasionally, though rarely, heard best at the pulmonary cartilage. Two conditions which it may be quite impossible to distinguish from each other by physical signs are: A functional murmur at the apex with signs of moderate dilatation (relative mitral insufficiency), and an organic mitral murmur with signs of compensatory change. A decision can often only be reached by considering the patient's general condition and the *persistency* of the murmur. This last is the clinching point, and is the final criterion to which uncertain cases must be brought. In plain terms, *we must wait to diagnosticate the murmur until it is no longer there to diagnosticate.*"

Obituary.

THE LATE DR. J. E. GRAHAM.

No death has occurred amongst the members of our profession in Canada during recent years which has caused such great and general regret as that of Dr. J. E. Graham, of Toronto, which occurred on the 7th of last month at Gravenhurst Sanitarium. Dr. Graham was indeed a star in the profession and had reached a position to which few ever attain. It may be said that practically



THE LATE DR. J. E. GRAHAM.

everything lay at his feet, but the grim monster interfered and cut short an exceptionally bright career.

Dr. Graham had been in failing health for some months, following an attack of illness which occurred last February. After spending some weeks in the Southern States he returned home recently, and on May 25th went to Gravenhurst to recuperate, but he did not rally as was expected, and passed away on the 7th

ultimo. He was the son of Mr. Joseph Graham, of Brampton, who died last March at the ripe age of ninety-two. Dr. Graham was born in Peel County in 1847, and received his early education at Weston Grammar School and Upper Canada College. In 1869 he graduated in medicine at Toronto University, being gold and silver medallist of that year. The following year he was resident physician of Brooklyn City Hospital, when he was appointed surgeon without rank in the Prussian army, a position which he held through the Franco-Prussian war.

After pursuing a post-graduate course at Vienna, Austria, also in London, England, where he obtained the diploma of L.R.C.P., he returned to Toronto to commence practice in 1872. He was married on July 15th, 1873, to Miss Mary Jane Aikins, second daughter of Hon. J. C. Aikins. In August, 1887, he was appointed Professor of Clinical Medicine and Medical Pathology, and lecturer on dermatology in his Alma Mater, and in 1892 succeeded Dr. Wright as Professor of Medicine. Dr. Graham was President of the Dominion Medical Association in 1887, of the American Dermatological Association in 1889, and was one of the original members of the Association of American Physicians. In 1893 he was made a member of the Royal College of Physicians, London.

After practising on Yonge Street for his first five years of work in Toronto, Dr. Graham removed to the corner of Church and Gerrard streets, where he remained until three years ago, when he removed to his late residence, 134 Bloor Street East. He was singularly devoted to his profession and took no part in politics or municipal affairs. He was a Methodist in religion, and a prominent member of the Metropolitan Church. For a number of years he was in addition a trustee on the board of Elm Street Methodist Church.

Dr. Graham was the first physician in Ontario who gave up general practice and devoted himself to pure medicine. He was also the first in Ontario who became purely a consulting physician. For some years before his death he was generally recognized throughout Canada and the United States as the most prominent physician in this country. He was very active in his medical associations, both in Canada and the United States, and was a past President of nearly all the societies he ever belonged to, including the Canadian Medical, the American Dermatological, the Toronto Medical, the Toronto Pathological, etc. He was at the time of his death President of the Ontario Medical Association.

Dr. Graham was a frequent contributor to medical literature, one of his most recent being a very able article on "Cholelithiasis," appearing in Vol. II. of Sajou's Annual.

In matters pertaining to medical education he always took a deep interest and exercised great influence. His aim was ever to raise the standard. He took special interest in the practical aspects of medical education. He was himself an admirable clinical teacher, and did a great deal towards placing clinical instruction in the important position it now occupies in this country.

His position in the University of Toronto was in many respects remarkable. He was for many years a member of the Senate, first as representative of the Toronto School of Medicine, and afterwards as representative of the graduates in medicine. His fellow-graduates showed their appreciation of his worth by placing him at the head of the poll at each of the two elections for the Senate in which he was a candidate. Apart from his popularity with the graduates he was beyond doubt the most influential medical member of the Senate.

Dr. Graham leaves a widow and four children. Joseph, the son, is a medical student, and there are three young daughters, Edith, Florence and Lucille.

The funeral took place from his residence on Bloor Street East on Monday, July 10th, to Mount Pleasant Cemetery. The cortege was one of the largest ever seen in Toronto, the attendance of medical men from both the city as well as outside points being exceptionally large. The floral display was particularly fine, showing the esteem in which the late doctor was held—"Till the day breaks and the shadows flee away."

THE remains of Dr. R. B. Potts, who died in Hamilton on Tuesday, July 11, were buried from his father's residence, 259 Palmerston Ave., Toronto, on July 14. Dr. Potts, who was a graduate of Toronto University, was born in Oakville, and before going to college taught school. He practised medicine in Essex for a time, and married a daughter of Dr. Pacaud, of Essex. He was a member of Acacia Lodge, A. F. & A. M., Orange Lodge, No. 779, Court Oronhyatekha, I.O.F., Hamilton Lodge, A.O.U.W., Council No. 1, C.O.O.F., Court Maple Leaf, A.O.F., Hearts of Oak, S.O.E., and Regina Tent, K.O.T.M.

The Physician's Library.

BOOK REVIEWS.

Twentieth Century Practice. An international Encyclopedia of modern medical science, by leading authorities of Europe and America. Edited by THOS. L. STEDMAN, M.D., New York City. In twenty volumes. Vols. I., II., III. and IV. New York: Wm. Wood & Co. 1895.

There are quite a number of medical men who are somewhat opposed to what are termed systems, whether they be systems of medicine, or systems of surgery, or any other principal branches of medicine as a whole. These opponents, if they may be so called, prefer, they say, to have a one or two volumed work, where they can readily get a short, concise chapter on any particular subject, which does not take long to glance through to secure the needed information. There are others who prefer to purchase a complete, often many-volumed, work, one which contains as nearly as possible everything which is up-to-date in that branch, and thus dispense with the necessity of further expenditure for some time to come. We admit that possibly both such classes have points in their favor. During the last quarter of a century, medicine has advanced in a wondrous manner in every branch, so that a work of but a few years ago would nowadays be all but obsolete, more especially in reference to treatment. It is during the past ten years that it might be said that "a new science has arisen, and a new theory of infectious diseases been established," necessitating almost the rewriting of medicine as a whole. In the "Twentieth Century Practice" a large and most influential body of writers have been called into service, and it is the result of their labor which will appear in the twenty volumes of this complete and wonderfully compiled work. Among the contributors to this system are Drs. Bulkley, Dana and Shrady, of New York; Professor James, of London; and von Noorden, of Frankfort-on-the-Main. The contributors to Volume I. are: Howard A. Kelly, of Baltimore; G. Frank Lydston, of Chicago; E. Harry Fenwick, F.R.C.S., of London; Reginald Harrison, F.R.C.S., of London; and Francis Delafield, of New York. Volume I. is devoted to diseases of the uropoietic system, and deals with diseases of the kidneys, ureters, bladder, prostate, male urethra, urine, female bladder and urethra. Under diseases of the kidneys, study is given to acute and chronic congestion, and acute and chronic degeneration of the kidneys, acute exudative, acute and chronic (diffuse) nephritis with exudation, puerperal eclampsia, suppurative and tubercular nephritis. The plates on pages 71 to 80, and pages 87, 88, 89, 90, 91, 92, 93 and 94 of Volume I., illustrating chronic nephritis with exudation, are very fine, and much more clear and distinct than many we have seen. A chapter under surgical diseases of the kidneys, entitled "Renal Tuberculosis," is most interesting, Reginald Harrison laying stress upon the fact that tubercular disease of the genito-urinary organs has a great deal in common with what takes place when other parts of the body are attacked, being distinctly hereditary, the disease corresponding in its occurrence with the period of life when the development and use of the sexual organs are commencing to be active.

A chapter entitled "Stone in the Bladder," is written in an exceedingly lucid manner and proves most readable. The writer, Reginald Harrison, of London, goes on to show that there is considerable risk in using the sound on an adult on whom that instrument had never been used before, more so than

that attending the removal of a moderate-sized stone by lithotrity. He prefers a solid steel sound, nickel-plated, not exceeding a No. 8 English bougie, and with a good curve. The author claims that sounds are too short, as a rule, and adds that when the prostate is large, sounds should not be less than fourteen inches in length. He states he has no partiality for hollow sounds, being afraid of admitting air into an organ, and thus aid the process of decomposition.

Dr. Frank Lydston, of Chicago, in his article on "Hypertrophy of the Prostate," shows that though in certain cases depression of the floor of the bladder and alteration in the walls of that viscus precede perceptible pathological change in the prostate, this condition may in no way be causative of the prostatic disease. General atheroma, with a resulting alteration of the structure and power of the bladder, may become associated with hypertrophy of the prostate, the view held by the modern French school. It is because the primary condition which precedes true hypertrophy is very exceptionally brought to the notice of the surgeon that so much obscurity as to its origin exists. Prolonged hyperemia incidental to various causes of irritation undoubtedly is the primary cause of the stage of hyperplasia before symptoms of any account are complained of. Lydston also treats of diseases of the male urethra in Volume I. In acute urethritis he claims that alkaline diluents should always be given throughout the course of the disease, either alone or in combination with other drugs. He says that the fluid extract of pichi (fabiana imbricata), a drug recently put upon the market, has an excellent effect in lessening the irritating properties of the urine, and soothing the inflamed mucous membrane. He also recommends the ergot of rye and the ergot of corn (ustilago maidis) as having almost a specific effect upon the disease. The fluid extract of corn silk (stigmata maidis) in doses of one drachm every two or three hours is also recommended. Lydston claims that during the height of the disease it is absolutely necessary to administer some anaphrodisiac preparation to allay sexual excitement and produce a sedative effect upon the inflamed part. For this purpose he recommends twenty or thirty grains bromide of potassium, or, if a more powerful effect is desired, such a mixture as the following one :

℞ Fl. ext. ergot min. xv.
Tr. gelsemium min. v.
Pot. bromid grs. xx.
Tr. hyoscyami min. xxx.
Sy. aurantii q.s. ad ℥ss.
M. S. At bedtime.

Local medication in acute urethritis, Lydston claims, can be best accomplished by the injection method. The author claims that injections may be responsible in many instances for stricture and other untoward sequelæ, yet, he says, as a rule it will be found that it is the abuse, and not the use, of injections that is responsible for unpleasant results. He says himself, "given at the proper time and in a proper manner and strength, injections are not only harmless, but very beneficial, and really prophylactic of stricture and other complications by limiting the severity and duration of the inflammatory process." Dr. Lydston holds also that it is not so much the form of an astringent as the method of its use that determines the beneficial effects. He prefers the sulpho-carbolate or iodide of zinc to the sulphate. Sulphate of thallin is also often of service in the strength of twenty grains to the ounce of rose water. He does not find in his experience that iodoform is even as efficacious as many other drugs, and in discussing that method of treatment by the insertion of soluble bougies of various types of medication, the author claims that such is not only illogical, but very injurious in acute urethritis, owing to its producing mechanical irritation. He also holds that the latest fad in treatment by the introduction of dry antiseptic powders through some patented device is open to the same objections as is the use of soluble bougies.

Dr. E. Harry Fenwick considers in Volume I. diseases of the urine at some length. In hematuria the objective signs and subjective symptoms furnished

by each patient permit of certain guidance rules being framed for the determination of the source and cause of the bleeding. They are based upon (*a*) examination of the urine ; (*b*) examination of the patient ; (*c*) critical examination of the symptoms complained of. Under the Treatment of Hematuria, Dr. Fenwick says that in hard carcinomata of the bladder, in engorged senile enlargement of the prostate and in renal hematuria, the result of cardiac disease, the bleeding is to a certain extent beneficial. He claims that the treatment of these cases is hopeless, and that it is better and kinder policy to allow the patient's life to ebb away rather than to prolong his misery by conserving his blood capital. In spontaneous hematuria, the first and most essential step is to allay the patient's fears and restore confidence ; absolute rest in bed is of primary importance, and the external application of cold (especially in ruptured kidney), by means of ice-bags over the loin or bladder, or still better by means of Leiter's pliable coils, which can be moulded to any part. Dr. Fenwick thinks very little of administering styptics by the mouth, though he considers ergot fairly useful. He usually employs opium freely, except where it is contra-indicated, when he substitutes bromide of potassium, hyoscyamus or cannabis indica. Belladonna should be avoided. When considering diet, solid food should be left out of the question till the severity of the attack has abated. Purgatives are contra-indicated.

Volume II. deals with Nutritive Disorders, the principal contributors being Archibald E. Garrod, Thos. J. Maclagan and Sir Dyce Duckworth, all of London, England ; Henry M. Lyman, of Chicago ; Carl H. Von Noorden, of Frankfort-on-the-Main ; Max J. Oertel, of Munich, and G. S. Dujardin-Beaumetz, of Paris. Sir Dyce Duckworth takes, as his share of Vol. II., Addison's Disease and Other Diseases of the Adrenal Bodies. Addison's Disease is best described in his own words, though defined by him as such forty years ago, "Anemia, general languor and debility, remarkable feebleness of the heart's action, irritability of the stomach and a peculiar change in the color of the skin occurring in connection with a diseased condition of the suprarenal capsules." Dr. Duckworth says that the relative proportion of frequency of this disease in males and females is 119 to 64, the majority of cases occurring in men between thirty and fifty years of age. As to treatment, he claims that the main line indicated by a consideration of the primary pathological process in the adrenal bodies is that proper for tuberculosis in any part of the body, removal from urban environment to pure country air, asthenia being the key-note of the disease, generous diet and good wine. Recurrent paroxysms of gastric irritability and of cardiac asthenia are to be looked for. Counter irritation to the loins is of very little avail. The grafting of adrenal tissue into the body by employing an extract from the adrenal bodies of the sheep has frequently undoubtedly good effect. A dose equivalent to three grains of the gland injected into the veins of the dog were found to produce, first, a remarkable increase of blood pressure, powerful contraction of the arteries, stimulation of the vagus and also of the cardiac muscle. For tonic purposes there is no better remedy than iron combined with strychnine and arsenic. Strong purgatives are always to be avoided, and over-fatigue always guarded against.

Diabetes Mellitus is dealt with at great length in this volume by Carl von Noorden, of Frankfort-on-the-Main. In speaking of the treatment of this disease, he prepares his readers by stating that he would not enter into an account of "what is done" for diabetes, but would state only what he himself was in the habit of prescribing for the disease. He divides the treatment into (1) Prophylactic; (2) Etiological ; (3) Methods of increasing the sugar-destroying function, and (4) Hygienic and Dietetic Treatment. Under Prophylactic Treatment, Dr. von Noorden says that it is but seldom that the physician is consulted sufficiently early to use any preventive measures. He makes a general statement, however, that in those cases where there is a history of many members being attacked by diabetes in early life, the early and permanent withholding of carbohydrates, especially of sugar, from the diet may prevent the occurrence of the disease. Under Etiological Treatment, the author divides his subject into (1) Neurogenous Diabetes and (2) Syphilitic Diabetes, consider-

ing both separately. Under Method No. III, of increasing the sugar-destroying function, he deals with (1) Treatment with pancreas preparations; (2) Treatment by withdrawal of carbohydrates; (3) Treatment with mineral waters, and (4) Medicinal treatment. The Dietetic Treatment of this disease is given greatest length, "deserving," as the author puts it, "of the most careful consideration." Under all circumstances, he says, the diet in diabetes must be so ordered that the strength of the patient may be thereby maintained and as far as possible increased. He maintains firmly that the diet of the diabetic must also be so constituted that it will furnish available material to the value of at least 35 calories per kilogram per diem. Under certain circumstances carbohydrates are injurious to the sufferer from diabetes. Proteids and fat must constitute the main portion of the diabetic's diet, and sometimes, in severe cases, shall constitute the sole diet. Alcohol is useful in many ways in diabetes. It assists the patient in the taking of fatty food which otherwise he might take a disgust for, and introduces a not insignificant amount of fuel into the body. Dr. von Noorden gives also some general directions as to treatment, *e.g.*, muscular exercise, bathing, treatment of constipation, effects of travel, etc., etc.

Dr. T. J. Maclagan in an article on Rheumatism, makes the statement that salicyl compounds cure rheumatic fever in the same way that the cinchona compounds cure intermittent fever. He says that it was the belief (1) that the rheumatic poison was allied in nature to that of intermittent fever; (2) that both were minute organisms; (3) that the morbific effects of each were due to its propagation in the system, and (4) that the curative effects of the cinchona compounds in intermittent fever were attributable to their destructive action upon the poison in that disease. It was this belief that led to the inference that salicin might exercise a like destructive action on the poison of rheumatism. "That it does produce this curative effect has been abundantly demonstrated," says Dr. Maclagan. There are but two ways in which the action of the salicyl compounds can be explained: either they so act upon the system as to render it insusceptible to the action of the rheumatic poison, or they so act on the rheumatic poison as to render it incapable of acting upon the system. Dr. Maclagan claims that there is but one febrile ailment in which the salicyl compounds are known to exercise a distinctly curative effect, viz., rheumatic fever, and in the whole field of practical medicine we know of nothing like it. As regards the heart complications of rheumatism, the author claims that the heart is specially apt to suffer in young people; that inflammation of the cardiac structures is more common in acute than in subacute attacks of rheumatism; and that rheumatic inflammation of the heart is limited to the left side.

Gout is dealt with in a very interesting and lucid section of Vol. II. by Dr. Henry M. Lyman, of Chicago. In considering the matter of treatment of this disease, Dr. Lyman says that one of the greatest secrets, as far as diet is concerned, in treatment, is the limitation of the ingestion of alimentary substances that are rich in nitrogen. The author points out how writers differ as to the use of meat by those of gouty diathesis, some advocating it, others the reverse. Milk should be depended upon very largely in cases of this kind, except in those who in their daily life have to undertake a good deal of muscular exertion. All excess in both eating and drinking must be avoided. Dr. Maclagan gives in his article various foods which can be partaken of at each meal without hurt, and which he advises should be followed as nearly as possible. He recommends copious drinks of water, such as that of the Poland Springs in Maine, patients who do so being rewarded with copious discharge of sand and gravel with the urine, followed by complete relief from preceding uneasiness in the region of the kidneys. Alcoholic beverages do not exert any appreciable influence upon the development of the gouty diathesis unless taken in the form of wine or malt liquors.

Dr. Archibald E. Garrod's chapter on Arthritis Deformans has many good points. He shows that the liability to this disease is greatest between the ages of forty and fifty-five, though no age really enjoys immunity from attack. Cases occurring in early adult life are apt to assume a more acute form. The

period of maximum liability in women is seen to correspond approximately to the years following the period of the menopause. Among the principal causes of the disease are *exposure* to frequent changes in the weather, *dietetic errors*, such as scanty food or such as is not readily assimilated, favoring the development of the disease. *Acute illnesses* of various kinds can prove exciting causes, as also some uterine disorders, worry, care, injury, etc. The author considers in his article, under the Clinical Features of the disease, the condition of the joints and muscles, the distribution of the joint lesions, the clinical character of the articular lesions, muscular atrophy, and muscular contracture as a cause of deformities. The abarticular phenomena are referred to under the headings, Cutaneous Pigmentation and Dystrophy, Subcutaneous Nodules, the pain in Arthritis Deformans, and minor sensory symptoms. Dr. Garrod devotes a small amount of space to Heberden's nodes, Arthritis Deformans in children, secondary and localized Arthritis Deformans. He points out, in discussing treatment, that it is particularly in the matter of treatment by drugs that the necessity of persevering steadily in any plan which is adopted becomes most obvious, and that it is because this fact is not sufficiently appreciated that many look upon the treatment of this disease by drugs as so hopeless, and that in so many cases one drug after another is tried in quick succession and without apparent benefit. The drugs most in repute are iodine and the iodides, arsenic and cod liver oil.

Dr. G. S. Dujardin-Beaumetz, of Paris, contributes a section on Diseases of the Muscles, Primary and Secondary Myositis, etc. One chapter is devoted to Thomsen's Disease, who, himself a victim of it, described it as "a tonic spasm of the voluntary muscles consequent upon an hereditary psychic disposition." It is resistant to all therapeutic measures, no remedy having as yet been found which has the slightest effect. A chapter is also given to secondary Trophic troubles, among which are instanced some diseases of the muscles resulting in an atrophy of the fibre consequent upon inflammation of the muscles, others which follow surgical affections of the muscles, and still others consecutive to lesions in the vicinity. Certain atrophic affections are secondary to dyscrasiæ, or those general diseases which induce alterations of a nutritive character in muscular tissue. Various poisons again exert a baneful influence upon muscles. Frequently muscular atrophies are consecutive to diseases of the nervous system, such as locomotor ataxia. Then in the upper extremities we find atrophies of the Aran-Duchenne type, *e.g.*, symmetrical atrophies beginning in the abductor brevis of the thumb and advancing to the hands and upper extremities. The principal type of muscular atrophy produced by medullary lesions is progressive muscular atrophy. It is in this disease that one notices the characteristic deformities of the hand, called variously claw hand, monkey hand, *main en griffe*, *main de squelette*. As to the treatment of those atrophies we must in the first place address our efforts to the relief of the primary causal affection and then endeavor to bring about an improvement in the muscular condition. Determine the cause of the trouble and then relieve it. When the muscular affection is consecutive to a lesion of the brain or cord, we may suspect syphilis and administer large doses of pot. iodide with some mercurial preparation added. For the relief of the atrophy, resort to massage and electricity. The last chapter is one on Obesity, its History, Etiology, Symptomatology, Pathological Anatomy, Diagnosis, Prognosis and Treatment by Dr. Max J. Oertel, of Munich, an article which is thoroughly interesting and instructive.

A System of Medicine by many Writers. Edited by Thomas Clifford Allbutt, M.A., M.D., LL.D., F.R.C.P., etc., Regius Professor of Physic in the University of Cambridge, etc. Vol. VI. London: Macmillan & Co., Limited. New York: The Macmillan Co. 1899. Toronto: A. P. Watts.

Volume VI. of this work, now come to a close, comprises Diseases of the Circulatory System (continued), Diseases of the Muscles and Diseases of the Nervous System. Those diseases of the circulatory system, not touched upon in Vol. V., and which are here dealt with, include under Heart Diseases, Right Side Valvular Diseases, Angina Pectoris and Diseases of the Mediastinum and

Thymus Gland. In his chapter on Angina Pectoris, Sir Douglas Powell states that this disease in the vasomotory form may occur at any age, but is most frequent between puberty and middle life. Though the more idiopathically neurotic forms are most prevalent among women, the attacks attributable to an exhausted nervous system from alcoholic and other excesses are more commonly met with in men. The author states that cold, in the sense of getting chilled, is the most important cause (whether immediate or remote) of attacks of angina in all its varieties. Those occupations and professions in which, through nervous strain, arterial tension ranges high, are favorable to arterial disorders. Gout is a frequent causative element in vasomotory angina. The recent influenza epidemics have had as a result frequent attacks of angina. Dyspepsia, constipation and other disorders of the intestinal tract act as causative agents also. Emotion of any kind will act similarly. Dr. Powell claims that the treatment is both prophylactic as well as medicinal. Mode of life must be considered; over-excitement, moral errors, dissipation, excesses in tobacco smoking and alcohol must be inquired into and corrected. The dietary of the patient must be carefully considered, especially in those about the climacteric period, or who present gouty phenomena or venous plethora. In the latter class of cases such waters as Carlsbad, Homburg and Nauheim are most beneficial. What will do much to relieve the patient also is the definite assurance to them that their distressing and painful symptoms are not dependent upon cardiac disease and not of a dangerous nature. The medicinal treatment of vasomotory angina is of considerable importance. It consists in lowering any excess of blood pressure which is not corrected by the hygienic and dietetic measures spoken of. Careful regulation of the bowels is most important. In highly neurotic persons, especially those about the menopause, a little hydrobromic acid and bromide of sodium may be prescribed for a time. Iron should be given in anemic cases. Arsenic is also a valuable remedy and may be combined with valerian in the form of a tenth of a grain of arseniate of iron with two grains of extract of valerian after food three times a day. The author warns the physician to insist upon the tendency to fly to stimulants and sedatives, during an attack, being stopped.

Under Diseases of Blood Vessels and Lymphatics, Thrombosis, Embolism, Phlebitis, Arterial Degenerations and Diseases, Aneurysm of the Aorta and Aneurysms of the Arteries in the Abdomen, Diseases of the Lymphatic Vessels are also treated, that subject being left in charge of Dr. Rolleston. The other contributors to this department are Dr. F. T. Roberts, Dr. G. Newton Pitt, Sir R. Douglas Powell, Prof. Welch and Sir W. T. Gairdner. Diseases of the Muscles are not taken up at length, there being but four contributions under that heading, including Myositis, by Dr. Batten; Myotonia Congenita (Thomsen's Disease), by Dr. Hale Waite; Idiopathic Muscular Atrophy and Hypertrophy, by Dr. Charles E. Beevor; and Facial Hemiatrophy and Hemihypertrophy, by Dr. Andrew Turner. Under Diseases of the Nervous System, a chapter of unusual interest and completeness is that by Prof. Sherrington and Dr. Sharkey, on Tremor, "Tendon Phenomenon" and Spasm. These two gentlemen present for readers of this book a very complete study of this somewhat obscure subject, and throw light on many points up till now quite obscure. Dr. Turney contributes an article on Neurotrophic Affections of Bones and Joints, and Mr. Hopkins one on Neurotrophic Diseases of Soft Tissues, both of which show considerable research and study. Dr. Allbutt has under this heading a short chapter on Adiposis Dolorosa, a disorder characterized by irregular, sometimes symmetrical, deposits of tissue in various portions of the body, which are preceded by or attended with pain. This is the disease first described by Dercum himself, and therefore the contribution though short is most interesting. Dr. Barlow gives two chapters, one on Raynaud's Disease and one on, what he terms, Erythromelalgia, a chronic disease in which a part or parts of the body suffer with pain and local fever, made greatly worse if the parts are allowed to hang down. Dr. Gibson and Dr. Fleming contribute an article of some length on Diseases of the Spinal Nerves, Dr. Judson Bury one on Multiple Symmetrical Peripheral Neuritis,

and Dr. Head on Trigeminal Neuralgia. Dr. Head's article on Trigeminal Neuralgia is most interesting. He divides his subject into four classes: 1. Neuralgia quinti major (tic douloureux, epileptiform neuralgia); 2. Neuralgia secondary to diseases of the nerves of the head, such as tumors involving the fifth nerve; 3. Neuralgia minor, viz. (*a*) true visceral referred pains due to disease of the intimate structure of some organ of the head, or (*b*) pains due to disease of the membranes or tissues surrounding some organ or to actual implication of the finer nerve twigs by the morbid process, and (*c*) neuralgias of the head and face arising as direct consequences of diseases in organs other than those of the head; 4. Neuralgias arising from general bodily states, such as neurasthenia, hysteria and the like.

Dr. Head goes into his subject in a thorough and complete manner, considering it under each of above headings. In the treatment the author lays down as the first and foremost rule to find out the organ from which they arise and to treat the conditions found there; also, treat the general condition of the patient, even though the local cause be already known, for whatever the cause of the pain it is always intensified by inanition, cachexia, anemia or any general diseased state of the body. If you find that the neuralgia bears any relation to syphilis or malaria, the specific remedies will, of course, be tried before any other treatment be adopted. The antipyrin group was found most useful by the author, phenacetin in ten and fifteen grain doses more especially. Gelsemium or butyl chloral are also most valuable, as also nitroglycerine in doses of $\frac{1}{100}$ to $\frac{1}{50}$ gr. three times daily.

A chapter of over seventy pages is written by Dr. Aldren Turner on Diseases of the Cranial Nerves, a contribution of great merit and written in an easy and most readable style. Medical Ophthalmology is dealt with by Mr. Brudenell Carter. Diseases of the Spine are treated of by Prof. Horsley and Dr. J. S. Risieu Russell, the former taking up Diseases of the Vertebral Column, Tumors and Compression Palsies, and the latter Affections of the Spinal Meninges.

In referring to this, the last, volume of a System of Medicine, as Allbutt's has turned out to be, we cannot but congratulate the publishers for the manner in which they have carried out this work. Of course, the delay between the publication of some of the volumes was unfortunate, but could not be prevented. The manner in which the material has been presented, the typographical excellence of each volume, and above all, the lucid manner in which each and every subject has been presented to the reader, is just cause for hearty congratulation to editor, contributors and publishers alike. It is little wonder that Allbutt's System of Medicine has had such a sale. W. A. Y.

Saunders' Medical Hand Atlases. Atlas of External Diseases of the Eye. By Prof. Dr. O. Haab, of Zurich. Edited by G. E. de Schweinitz, A.M., M.D. Philadelphia: W. B. Saunders. 1899. Toronto: J. A. Carveth & Co. Price, $3.00.

This last volume of the now well-known Saunders' Series of Atlases, many of which have already received favorable comment in these columns, is not merely an atlas of the external diseases of the eye, but also a treatise on the mode of examination of the eye, and the pathology and treatment of its diseases. An atlas of disease can never take the place of clinical observation, but, unfortunately, it is not given to all to have large clinical advantages. It is the aim of such atlases as these to give us, in the greatest possible measure, these advantages, to introduce into our libraries the clinic of a large hospital. Necessarily, the illustrations are typical, although typical cases are those most easily recognized.

There are better atlases of the external diseases of the eye, but they cost at least six times as much, many of them even more; but they are by no means six times better. The lithographs of this atlas are here and there too highly colored, but it may be said that there has not yet appeared an atlas published at so reasonable a price which can at all be compared with this in the accuracy and fidelity of its illustrations.

 J. M. M.

Diseases of the Ear, Nose, and Throat, and Their Accessory Cavities. By Seth Scott Bishop, M.D., D.C.L., LL.D. Professor of Diseases of the Nose, Throat, and Ear in the Illinois Medical College ; Professor in the Chicago Post-Graduate Medical School and Hospital. Second Edition. Revised and enlarged. Illustrated with ninety-four chromo-lithographs and two hundred and fifteen half-tone and photo-engravings. Extra cloth, $4.00 net; sheep or half-russia, $5.00 net. The F. A. Davis Co., publishers, 1914-16 Cherry St., Philadelphia.

A noticeable feature of Dr. Bishop's book is the profuseness of illustration. Of the engravings, many are of the author's own specimens, an unusual number being used to demonstrate the bony structures of the nose and of the accessory cavities. The chapters on this subject. and on diseases of the mastoid, are much more complete and satisfactory than those usually found in a text-book of this size. The treatment of diphtheria with antitoxin is endorsed, but with rather less positiveness than experience would seem to warrant. J. M. M.

The Anatomy of the Central Nervous System of Man, and of Vertebrates in General. By Prof. Ludwig Edinger, M.D. The F. A. Davis Co., Philadelphia. 1899.

This admirable translation by Dr. Winfield S. Hall, is from the fifth edition of the German work, and forms an exceedingly valuable contribution to the literature of the subject. The treatment is accurate, yet exhaustive, and while much that is new is introduced, the main end of the treatise, suggested by the title, is never overlooked. The book contains nearly five hundred pages, and is copiously illustrated by two hundred and sixty figures in color. In the preliminary chapters a short history is given of the progress of investigation of the central nervous system. The work is most timely, and affords a much needed guide to a subject that is too vaguely understood. E. H. S.

Defective Eyesight: the Principles of its Relief by Glasses. By D. B. St. John Roosa. New York : The Macmillan Company. 1889. Price, $1.00.

The general practitioner who wishes to know the principles upon which the prescription of glasses is based will find this elementary manual interesting reading. The mathematical terrors of optics and refraction are carefully relegated otherwhere, while the practical application of the principles deduced therefrom are set forth lucidly and concisely. J. M. M.

REPORTS RECEIVED.

Thirty-first Annual Report on Asylums, Prisons, and Public Charities of Ontario. 1898.

It has been found impossible to send a circular concerning the Canadian Medical Association to every practitioner in the Dominion, as the lists of addresses are imperfect. It is particularly requested that any reader of this Journal who has not received a circular, and who takes any interest whatever in the advancement of professional and scientific progress, will send a card to the General Secretary, Dr. F. N. G. Starr, 471 College Street, Toronto, from whom he will receive all information.

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Original Contributions.

THE PRESENT ATTITUDE OF THE MEDICAL PROFESSION TOWARD ILLEGAL PRACTITIONERS.*

BY THOMAS J. HILLIS, M.D., NEW YORK.

THE law assumes, and the people take it for granted, that the advertising quack is a legal practitioner of medicine, and that when he advertises himself and his ability in the newspapers he is only exercising one of the inalienable rights of his citizenship. Later, we will examine and determine the quality of this right, only to find that he, too, is an illegal practitioner. For this reason there is confusion in some minds about terms as applied to quacks and abortionists. Some people very properly regard both as the veriest sort of knaves, as well as quacks; others, again, look on the professional advertiser as rather worse than his friend the abortionist, for the reason that the latter may be acting in good faith toward his patient who is in a dilemma, and while breaking the law, makes an honest effort to allay her anxiety of mind and relieve her of her burden. If she threatens to destroy herself if her child is not done away with, and if the abortionist takes this threat in good faith, there may be some moral justification for his act, as the child is sinless and prepared to stand trial for crimes it has not committed. The mother, on the other hand, has sinned by breaking the moral law, and is prepared to sin again by offering her life as a sacrifice for this transgression.

*Read before the New York County Medical Association, February 20th, 1899.

The advertising quack cannot be said to be animated by any such motive as is thus attributed to the abortionist, for, to the discerning eye, his advertisement is only what he wishes could be accomplished rather than what is or can be. The former is dealing with possibilities; the latter is trading on the credulous and fools. Technically the illegal practitioner is doing something contrary to law. The law condemns him for so doing, and brands his offence as a crime. For this reason this criminal pursues his vocation with extreme caution. He throws out his feelers before he takes a step and thoroughly surveys the field. So shrewd is this illegal practitioner, and so careful in the technic of his diabolical practice, that he is very rarely caught. True, some of the more conspicuous ones have cheek and impudence enough to advertise cautiously, often in religious weeklies, about their success in treating certain diseases peculiar to women. Others flood the practitioners' mail with their business cards, which are very carefully worded, but nobody is deceived for a moment as to their meaning and import. His object, no doubt, in sending his cards to physicians is this: Physicians are very often approached by their regular patients and others about a trouble of which he makes a specialty, namely, procuring abortions.

The family physician hesitates; he is weak, avaricious, and hungry for money, and would dare to try, but he fears to fall, so he shares the profits by indirectly referring his patient to him who relieves without inconvenience or danger. That sly specialist may, by his daring and dexterity in his art, command an income of fifty thousand a year; and it is current gossip that there is in the borough of Manhattan about a dozen so-called physicians who actually exceed this mark. Across the way, and in the same street with one of these specialists in diseases peculiar to women, is a competent and thoroughly equipped physician, respectable and well thought of, who works very hard for an income of less than a thousand a year.

The abortionist when discussing this poor man's business affairs disposes of him briefly and laconically, by saying, "The fool does not know how to catch on." In marked contrast to the abortionist is the advertising quack, who hires space in the newspapers by the year, and who is as well known to the business managers of those newspapers as a child is to its mother, or a deacon to his Sunday School class. They know that he is an impostor, who uses their paper as a medium to procure money under false pretences, but as it is to their interest not to antagonize him they leave him quietly in the care of the moralist and the social purist; but he is safe there, for, as a matter of fact, he has them in his pocket, and their physiognomies adorn his flaming and lying advertisement in the morning papers, where, over their signatures, they bear testimony to the efficiency of a nostrum of which they know nothing, and about whose physical properties they are perfectly ignorant. The ways and means by which the unscrupulous advertising knave

contrives to reach the heart and conscience of the deacons, the moralists and the governors, whom he trots out from time to time on dress parade in the newspapers to trap the unwary, the writer would prefer to leave to conjecture, but such will not satisfy the inquirers after facts nor placate the searcher after truth, who will, after investigation, say: "The fraud was a mutual benefit affair and division of the profits of dishonor." The man of the world will declare: "The quack fixed it with his glorifiers and the community swallowed the bait"; so the procession moves on and on, while the advertising quack makes the minister, the deacon, the governor and the senator dance together, or in turn, to the music of "Punch and Judy" in the show he has got up to enrich himself.

Here we have, to the shame and lasting disgrace of human nature, the pillars of the church, the leaders of the bar, and the senators in the forum bearing witness to the efficacy of worthless trash, that they are made to say in the vernacular of the newspaper doctor has made them well when their family physician declared there was no hope; that the grave was the only refuge now. As a matter of fact, the family physician said nothing of the kind, nor was he consulted in the matter at all, it being a question of connivance or dollars with the parties concerned. This man, the so-called legal practitioner, makes a fortune by proclaiming to a wondering and confiding world the efficacy of his magic salve and the potency of his electric belt.

Minus the newspapers, his salve has probably not more value than an equal weight of axle grease, nor has his electric belt any potency other than that which can be found in the belly-band of a mule's straddle. The secret of the successful swindle lies in the wide publicity given to his vulgar eulogies of himself, the number of fools in the world, and the way one can be made to impose on one's self. Another fact worth noting is that most of the newspaper cures are done by men who are not physicians at all, but who are clever business sharps who see an opportunity to make a dollar, and embrace it. These sharps have keen business instincts and are veritable human bloodhounds on the trail for the almighty dollar. They transact their dishonorable dealings very often through a dummy, nominally a doctor, whom they push into the field of observation as a decoy; this dummy, and there are many like him, is only an expression of the will of the bloodhound, who keeps himself in the background, and who is the body and breeches, soul and inspiration of the whole advertising scheme. He gets others to furnish the money while he edits the wily programme and directs the crooked partnership. The poor physician is the hired tool and the cover from behind which the clever rascal, who is not a doctor, bleeds and cures the public. This rascal procures a charter through his tool who is nominally a doctor, from obliging legislators, and organizes himself and his partner in iniquity into an institute, a college, or a medicine company, as his fancy or his instincts may direct. He begins business by opening an account

with the press and helping a poor church to pay its mortgage. Later he is elected trustee in that church and director in a trust company. Then we have the illegal practitioners—the abortionists; that is their name, and child-killing is their vocation—pursuing their calling under the very eyes of the law and growing rich with rapid strides, while nobody challenges the source from which their wealth has come. The advertising rogue and schemer gave from his abundance to the little church around the corner, and like a brand from the burning, rescued it from the clutches of the sheriff, whom we have seen, seize it for debt. Now it is the abortionist's turn, and he is ready to aid the good clergyman, who is ill at his humble lodgings from lockjaw acquired through persistent effort at denouncing imposture and hypocrisy from his pulpit, and his terrible warnings of the judgment to come. That abortionist, as much for diversion and joke as for the hope of reward, sends round his valet with a cheque for $25 as a New Year's offering to the afflicted and impecunious servant of God. The humor, pathos and generosity of this philanthropist appeal as strongly to the comic opera singer as it does to the student of human nature. He heaped coals of fire on his enemy's head, and by this clever move he has transformed a conscientious, and what might prove a dangerous, enemy into a life-long friend, for at court he was there to bear testimony to the good character of his benefactor; but the case for the people broke down, which case will be described with more particularity presently.

How a Criminal Evades Punishment.

A patient, a lady of twenty, calls at a respectable practitioner's office; her eyes are red from weeping; she is in distress, and good-looking. It has been observed that it is the latter type who is oftenest in distress. She tells the physician with a glimmer of sunshine flashing through the halo of misery that has encompassed her like a fog, as she raises her eyes coyly from the depths of her despair, but they don't meet his, that she does not know what is the matter; she is sure there is nothing, but is anxious that something be done for her at once, or she will jump into the river, or drown her sorrow in an ounce of carbolic acid. She repeats she is sure there is nothing the matter, but admits in answer to a question by the doctor that she saw Arthur but once, just once, and then only for a minute; that she is certain, as the time was so short, nothing could have occurred. A furtive glance around the office, then a moment of suspense and strained attention like a frightened hare, as if the walls had ears, and her mother on the other side listening to the conversation.

A hot tear, and a suppressed exclamation of surprise as she reads the doctor's answer in his face before he speaks, and again she reiterates her innocence. The physician advises her to go to her mother, make a confidante of her—she will doubtless advise her to marry her lover, go to housekeeping and immediately settle

down. Her eyes glow with a genial fire at the mention of Arthur's name as she throws back with kindly but offended air, "I will not marry him now if he were hung with diamonds, neither will I tell my mother, but I know what I will do," and she straightway leaves the office.

That night, under cover of darkness, she entered the office of Dr. W., chaperoned by a female friend, who is not a stranger to trouble like hers, and is an adept in extricating others from like troubles. Five days later there was a funeral in Harlem. It was that of a lady, young and beautiful, so the papers said, who had died suddenly from inflammation of the bowels, by eating too freely of rich candy that brought on an attack of acute indigestion, which extended downward, invading the peritoneum and causing death. It was with difficulty these particulars were obtained by a reporter for the press, as the family was prostrated and in no condition to be interviewed by the news gatherer.

Dr. M., a regular practitioner, who was in the pay of Dr. W., signed the death certificate; it had a suspicious look and was rejected by the Board of Health. Then came arrests and indictments. Society is shocked, and the gossips are active and happy. The District Attorney's assistant said he had a strong case; that virtue must triumph and crime be punished was the motto he chose when taking office a month previous. He said he would show the people there was no mistake made when he was placed in charge of the criminal department of the city's legal bureau.

In court, at the trial of Dr. W., this well-intentioned Assistant District Attorney cut a sorry figure, for in his legal fencing with the criminal expert hired by the defence, he was outclassed, outpointed, and floored every time. When he finally capitulated to this luminary of the criminal bar, he looked very much like one who had been dragged through a threshing-machine, or shot a mile through a pneumatic mail pipe. While he was clearly defeated, he managed by some legal legerdemain of a clever colleague to have the case called a draw if certain conditions were complied with and the time was opportune. The opportunity came, the conditions being favorable.

The coroner's physician, on whom so much depended, is uncertain and goes to pieces on pathological anatomy in cross-examination by the medical expert for the defence. The coroner, himself, is rather undecided now, though he was sure when taking the ante-mortem statement of the dying girl, that she was rational and declared to him that she recognized her end was near and that she was about to die. Gossips say that they saw the coroner and the legal expert for the defence early in the day together quietly discussing the case. The bolder of them said it might mean something, as it was known the coroner was a politician and a political heeler of the third order before he became a high city official. Of course this, even if it were true, was unkind, as this honorable functionary was elected because of his special fitness for this office;

further, he swore before a high priest of the law that he would serve the people well. Besides, we know that gossips' tongues will wag and Dame Rumor is no respecter of persons, not even the sacred personality of a New York coroner.

The faithful policeman, the strong man of the prosecution, is very weak and confused on the witness stand, and gives his testimony with much hesitation. On cross-examination he admits he mistook some other man for Dr. W., between whom there is now, he thinks, no resemblance, though it was very apparent then. Other witnesses for the prosecution disappeared as if the ground opened and swallowed them. Immediately before their disappearance some of them were seen in company with a friend of the accused physician. At this juncture, who that has no pity for the able Assistant District Attorney, now, in this the hour of his discomfiture, particularly for the vows that he vowed, and for the defeat of aims so exalted. There is now only one honorable course open to him and he embraces it—to make a public apology to the defendant in the case, Dr. W., for the unpleasant notoriety he has given him and the humiliation it must bring him to be associated with anything flavoring of criminality, so he then and there in open court, gave Dr. W. his word of honor that such a blunder should not again occur during his incumbency of the office of assistant district attorney.

He said in the early history of the case he was enthusiastic of immediate conviction, but later developments made it plain that his case had not a leg to stand on. This fact, he continued, prompted him to make the apology public, and further, make to Dr. W. any reparation he could. Then came the hand-shaking and congratulations of the crowd of friends and retainers that surrounded Dr. W. and his quick-witted attorney. They, with one voice said, the aggrieved physician should sue the city for slander. At this the lawyer winked his left optic, and arm in arm walked into the air of freedom with his much-abused, but sinless, client.

It was thought wise by the writer to preface the attitude of the medical profession toward illegal practitioners with one or two illustrations or examples of how these men defy the law and escape punishment.

An occurrence of the kind described is not infrequent, so that the profession has got used to it, and therefore pays little attention to the burlesque on justice enacted every now and then in coroners' jury rooms and even in high courts of law. The attitude of the profession may be said to be one of suspicion toward the legal machinery of the criminal department of the city government, and of contempt for the quacks and disgust at their methods. With the state of affairs that has existed, and which still exists, it has long ago concluded to wash its hands and stand aloof from the whole matter, and leave the quack and the illegal practitioner severely alone, to pursue their disreputable calling as unmolested by them as they are by the city authorities.

The respectable element of the medical fraternity, which nominally means every registered physician within our metropolis, is not by any means as large as is supposed. Leaving out the apologists, active allies and imitators of the advertising quacks and abortionists, the number of really honest and upright physicians is disappointingly and surprisingly small. This will not be wondered at when we recollect how easy it is to obtain membership in a medical society, and that hundreds holding memberships advertise, for, be it remembered, there are other means of advertising than the newspapers. Some of the kind alluded to, having a surgical operation of the most ordinary kind to perform, enlist the services of a reporter, who writes up the operation with great flourish and with headlines of blazing type; he says it borders on the miraculous and is the boldest and most heroic operation yet undertaken by any physician of the age, and modestly winds up by saying, "It was performed by Dr. A. after a prolonged consultation with Drs. B. and C., who all three have a high standing in the medical profession, and who are members of several foreign congresses and correspondents of honorary societies abroad, besides being members of all the prominent home societies."

This puff in the newspaper is bought and paid for by the parties interested, though they pretend to be unaware of its publication and to be shocked when their attention is called to the matter by a respectable practitioner, and speak incoherently and vaguely of sueing somebody; but privately they order advance sheets and proudly but stealthily circulate them among their friends and endeavor to make friends and patients out of strangers on the strength of the exhibition of the article they have inspired, and so industriously distributed.

So much has this practice been in vogue that our ranks are full to-day of men, young and old, who are eager to figure as surgical pioneers and medical prodigies, posing as popular idols in the field of experimental surgery, and are hungry to have the most ordinary case talked of, written up, and discussed with joy and wonder by the masses, to whom such an appeal is a revelation and by whom such men as they hope to be launched into prominence and reap a reward that their talents never entitled them to, for, talk as we may, hero-worship has a hold on the masses and is deeply rooted in the heart of human nature. The popular heart will respond alike to the brilliant achievement of the scalpel or the bugle blast of war.

No man is more likely to get a big vote than the soldier who has won fame on the battlefield, even if in order to become possessed of the latter he waded knee deep in human gore, nor is any physician more likely to spring into popular favor than he who was advertised as the man who did the marvellous operation, even though it was a pretence and a sham, and that for such he was repudiated by the respectable element of the profession.

The attitude of the profession towards the illegal practitioners,

feeble and childish, of course, has made them bold and defiant, and enables them to throw back our disrespect and scorn with interest on our heads. They say the justification of their work rests in its success and its general approval by the people. It is conceded that the illegal practitioners are a financial success, but the means employed to bring about this success are questioned and unanimously condemned by us; but condemnation to these men amounts to nothing if it is not accompanied by a sentence of hard labor in the penitentiary. However, and unfortunately, such a happy result as this is well-nigh impossible from the manner in which they juggle with justice.

These illegal practitioners rest on their laurels and take things easy, knowing our weakness and lack of cohesion. Since these scoundrels—the quacks and abortionists—are growing influential as well as rich, we must now bestir ourselves in order to shake off the effects of the Rip Van Winkle sleep which has paralyzed, dazed and muddled us for so long.

These medical charlatans, who, hanging on the flanks of our profession and feeding on its vitals, have spread a repast for themselves on the bosom of the people whom they claim as their own, will soon come to be looked upon as a necessity, and no longer amenable to any legal restraint.

The penalty on the statute books for their crimes will become inoperative and obsolete as it will be counter to public opinion, and will lie in the legal archives of the State, like dead leaves on the woodland, a jest for the illegal practitioners as the leaves are a plaything for the winds that blow through the forest. Then the illegal practitioners will claim to practise their unrighteous calling and not even the respectable practitioner will have a voice to challenge or combat that right.

Now, the danger signal must be planted on every hill-top and the call to duty sounded through the camp, that the yeomen still in the medical profession, growing fewer every year, be up and active; if not, the illegal element with the constant re-enforcement of those who are deserting us, and who have already stolen our dollars, will very shortly elbow and crowd us out altogether. A little more headway to the forces of quackdom and they will ride roughshod and in triumph over prostrate but well-intentioned professional opinion.

The most dangerous plight or condition a person can be placed in is, to be the object of negative resistance; it is practically a condition of inertia and helplessness where a person or thing is at the mercy of an active force. This is just the position of our profession at present—at the mercy of the power and momentum of the illegal practitioners. These men are all pushers and hustlers, with coats off and sleeves rolled up and in the attitude of pugnacious defence toward any and all who come along to dispute their right to occupy the choicest rooms in the medical household.

Gentlemen of this medical society, these men—the illegal

practitioners—are striking at us from the shoulder and improving daily in their method of attack. What sort of defence are we of the regular profession making against their well-directed efforts? Are we putting up any fight? No, but we intend at some future time to go into training in order to learn how to defend ourselves against these expert fencers.

This procrastination on our part and putting off to another day is fatal to our interests; we must not wait for a future day but act at once by seizing the first weapon that comes to our hand and hurling it at those insolent pretenders and bullies, who, like all bullies, are cowards at heart. The good intentions which have been the stock-in-trade of our profession, can offer but poor resistance to the active and organized opposition of these illegal practitioners. Our intentions have been hitherto, and are now, feeble and inert when directed against such wily foes. Saint Augustine, when describing some of the aspects of an analogous case, said, "Hell is paved with good intentions, while it is conspicuously lacking in good actions."

The Attitude We Should Assume Towards the Illegal Practitioner.

The remnant of what is left of a once proud and honored profession should put its good intentions to practical account by getting together and offering or presenting a united resistance to the constant encroachments of the illegal practitioners. We should combine against our common enemy, and as he is a shrewd and unscrupulous foe, fight him with his own weapons, or as the saying goes—fight the devil with fire. We know that the claim of the newspaper doctor exists only on paper, because he has always failed to make good his advertised promises, though technically this self-eulogized blow-hard of newspaper notoriety is classed with legal practitioners. He is, as a matter of fact, as illegal in his methods and just as criminal as the abortionist, with this difference: the latter, who may not be a quack, is one who, as a rule, makes good his promise, since, in a majority of cases, he accomplishes what he sets himself about to do, and generally keeps faith with his patient, who is not, as some would have it, his victim, but his tempter and accomplice. The law simply commands that a thing shall not be done by a medical man to whom it sees fit to grant the right to practise within the precincts of its jurisdiction. The physician who takes the risk and breaks the law of the State has an opportunity to get rich; at the same time he exposes himself to all the penalties to which a broken law appeals.

Now, while the State has a right to punish the abortionist for breaking the law, it has also an obligation to protect the innocent honest practitioner in the lawful pursuit of his calling; however, the general practitioner does not care to figure as a mendicant, sitting at the feet of the State, begging its protection, or soliciting alms from passers-by. He must, however, in order to exist, demand

of the State that it sees to it that its officials are not venal and color-blind when a case is brought up for final adjudication as to the guilt or innocence of a suspected abortionist.

The attitude the profession should assume toward both the quack and the illegal practitioner, whose business methods are known to us to be vicious and opposed to public policy and good morals, is one of outraged honor where latent and pent-up disdain is converted into energy and liberated through practical channels; it should be practical enough to assume the aggressive and take on itself the form of active hostility. As was hinted at before, we must take those men seriously and fight them to a finish. If the advertising quack can accomplish what he claims he can, and is as expert at the art of healing as he says he is, then we will have to say good-bye to the general practitioner and the whole brigade of vaunted specialists, who figure so conspicuously on the Medical Boards, and arguing from the standpoint of the triumphant quack, it will be good riddance of bad rubbish.

The medical profession with its chosen leaders, and under the banner of stalwart conviction, should take the offensive by making open war on the illegal practitioners, for, as was related before in a previous part of this paper, though the advertising quack is nominally a doctor, and is accepted as such by the constituted authorities, he, is nevertheless, in strict interpretation of the word, a law-breaker and a public offender; for, in a manner not very difficult to prove, it can be shown that he is a sharper and impostor, who has always and is now receiving money under false pretences, which is a crime in the eyes of the law, to be punished by fine and imprisonment. Then the abortionist and the quack stand together at the head of a homologous series, far down which can be seen a crowd of regular practitioners humbly gleaning where they have reaped. Now, the abortionist and the doctor of newspaper notoriety, notwithstanding the superficial legal distinction, are standing moral criminals on the same platform, and are equally guilty of high crimes and dark and shady transactions. They are both a menace to the public health and to progress and prosperity of the State. On these lines the illegal practitioners must be attacked, until they are driven from the field, placed behind bars and the law vindicated.

The attitude of the medical profession, then, as it should be, must be one of personal effort with constant watchfulness and cautious advance; we must not make the mistake of underrating our foe; he is unscrupulous, merciless and well supplied with money, which he has wrung from the public by fraud and imposture, and is prepared to use it any time he gets into the clutches of the law, to bribe weak and venal officials, and frustrate the ends of justice.

Our previous attitude, though one of scorn, will not any longer suffice; that was all right as far as it went, but it did not go far enough. The profession is now suffering from its lack of energy and want of aggressiveness in the past, and to-day realizes the fact

that it held these fellows too cheaply, allowing themselves to be trampled on and robbed of their rights by knaves and scoundrels who have grown fat on the proceeds of infamy and false pretences. These men should have no recognition, as they have always been out of the race when honor, decency and good citizenship were the prizes to be won. If the advertising quack can cure consumption and restore motion to ankylosed and long-stiffened joints, he is able to do more than the surgeon and regular physician, and far more than the family doctor. The educated, trained physician is baffled by disease in the sick-room every day; he tells the family of his impotency in the matter, adding that he can make the patient comfortable, but that restoration to health is out of the question in a case so grave as the one now presenting itself to him. He recognizes the limitation of the legitimate practice of his profession, and lays no claim to the marvellous or supernatural in the treatment of disease. He is able to account for his success or failure in a given case in an intelligent if not always a scientific manner, and anticipates and defines fevers and allied conditions as the result of over-action or congestion in a part, or lack of elimination of waste products by diseased or insufficient organs.

When the regular practitioner halts on the threshold of the impossible, honestly declaring he can go no farther, and that as far as human effort is concerned, it is helpless to effect a cure, the newspaper quack steps in and claims that he can begin where the regular physician left off and bring the doomed man around to a condition of perfect health. Now, if he is able to do this by the exercise of any agency whatever, he has a right to get credit for his skill, since it has proved itself superior to the science of the regular physician, who should step down and out, and as he goes should pay a fit tribute to his successor, who is no longer his rival but his superior.

Now, since the quack's efforts are crowned with success, we must no longer address him by an epithet so unbecoming, but look up to him with respect, prompted by the awe that his magnificent work has inspired. With this happy condition, which is evolved from the brain of the advertising physician, inaugurated, the colleges should disband or be mustered out of service at once, since there is no further need for their graduates, because the curing and healing is done by men who have paid no attention to the teachings of such institutions, and who only laugh as they read over the curriculum of college catalogues.

If the things are true that the advertising physician says of himself there is no further need for us; we only block up the road to progress and should vacate gracefully, not having even claim to squatter sovereignty, as such would be an evidence of our failure and unfitness for the profession about which we know so little. Our signs will further be a finger-post and target for the raillery of the triumphant quack who is vindicated and redeemed, while it will furnish a subject of laughter to the doomed man who was by

him made whole. If that doomed man gets a new lease of life through the potency of the drugs dispensed at the hands of the physician who advertises of himself in the newspapers, he has a right to be thankful and a further right to tell the story of his rescue to his friends and neighbors, and to have all whom he can influence or appeal to through the press to go and do likewise. The State should recognize his worth, crown him with honor in life, and revere his memory when dead by practising his virtues.

Now, in this practical age and time of quick adaptation of means to an end, it should not be a very difficult task to find out definitely whether the advertising physician is really all he claims to be. The consensus of opinion in reputable and disreputable medical circles alike, is, that he is not. The public has also about the same opinion, but the opinion of the public oscillates, like the pendulum of a clock, and is often uncertain. It is shifty in medical matters and on the whole, in the safe keeping of the quack.

Public opinion, in matters pertaining to the public health, has always been of the nebulous order, where rapid changes and unstable conditions alternate, and is known to find its greatest expression in the field of bustle, clamor and excitement. Those varying public sentiments should be harmonized and crystallized to a concrete substance that can be acted on by common-sense and practical demonstration as to actual facts.

The public should be schooled to recognize that its own interests lie rather in the line of investigation and demonstration of the fallacy of chimera and superstition rather than the taking of them to their hearts and adopting them as their own without inquiry or thought of fraud or imposture. This is why the quacks and newspaper doctors are so rich, and the great body of regular physicians so poor.

Now, gentlemen, we of the medical profession have a double duty to perform—to point out to the people the error of their ways, and to thoroughly ventilate the methods of the quacks and abortionists, since we are willing to abandon the field of our professional labors if they prove their worthiness to public gratitude by demonstrating before an impartial tribunal the truth of their miraculous cures, with accounts of which the newspapers teem, they, in turn, failing in their purpose, should follow our example and cease from further robbing and fooling the public; but such a course on their part would be wholly foreign to their feelings and history of their callings.

Now, if we are able to impress the public with the fact that the quack did not cure the consumptive, whom we abandoned as a hopeless case, but on the contrary, lulled him with hopes, delusive ones, of course, until he drained every dollar from his slender purse, then found a pretext—and it was, that he failed to comply with the conditions which pointed to success—that he might the easier sneak from the responsibility with good grace, he, like us, abandoned the sick man, but not on lines converging towards ours.

The man who robbed this dying man is an advertising doctor who tries to escape the penalty for his dastardly act by tricks and devices and sleight of hand in dealing with the legal authorities, that his day of reckoning may be deferred indefinitely.

It is a difficult matter to send a man to the penitentiary, even though he be a bad man, about whom the following may be written by the District Attorney:

"DEAR DOCTOR,—I saw your advertisement, took advantage of the hope you held out, followed your directions, and am now well and happy, and rejoice to be able to testify to the virtues of your wonderful compound.

"Very truly yours,
"DISTRICT ATTORNEY OLDBOY."

Under this signature is the testimony of the pastor, who was afflicted with lockjaw, whom he formerly befriended; of these two men—the district attorney and the clergyman—he makes in turn a weapon of defence to beat off his enemies, and a magnet to attract new business. This can be better understood when we recollect that judges, bank presidents and bishops have very often been made the tools of designing persons, as clairvoyants and medical quacks. This is sometimes accomplished by an accident, oftener by well-laid plans. The advertising doctor is a good illustration of the latter; the abortionist a fair one of the former.

The way in which these men delude the public furnishes an interesting study in the science of criminology. It is little wonder the hard-working practitioner, who is worn out in his efforts to do good, and while doing so, scrupulously obeys the law, loses heart and grows despondent. To the right of him, to the left, and in front, are the quacks and abortionists; his position is a critical one. To go ahead is to invite disaster, and to retreat is cowardly; but if he retreats to protect his flank and rally for a final struggle, it is strategy, and that is what he must do. In order to make the attack successful he must recognize the measure of energy that is in him, go to his professional neighbor and tell him of his plans, fire him with his enthusiasm and ask his aid and co-operation, as well as his counsel, in organizing a circle with fire and soul enough to roll on in the direction of direct results and consisting of the whole battalion of available practitioners, which, of course, will include every form of honest specialism.

The effect of this action and organized opposition to the methods of the illegal practitioner would drive him from the offensive and give us a vantage-ground of inestimable value to pursue tactics looking to the unconditional surrender of that felon. This course would have been pursued long ago individually and no doubt collectively by an energetic and aroused professional opinion; but such opinion appears to be stifled and held in abeyance by frothy and colorless declamations from the lips of interested or ignorant laymen and lawyers, trotted into the halls and lifted to

platforms by men among ourselves who, by our carelessness, have elected themselves to office and organized themselves into committees, executive and otherwise.

These men have declared themselves guardians of our professional conscience and the keepers of the medical scroll ; but we are not deceived by their suave and polite handshake, behind which we have discovered double-dealing and treachery. They are self-seekers and obstructionists, and altogether a very commonplace lot, without a single quality fitting them for leadership, if we leave out unlimited self-assertion.

Nothing whatever in the way of reform can be accomplished by this self-constituted directory, compared to which the illegal practitioners appear in a favorable light. At present they strut around and amuse the stage with their mutual feeling of good-will to each other and reports of experiences and triumphs.

It is now imperative that they be brushed off the stage to make room for the real reformers, who are prepared to try conclusions with the illegal practitioners, and would have done so long ago had they not been scared off by the loud cries of the self-constituted reformers, with a "wait to see what we will do." So far, however, the efforts of the reformers have awakened about as much ridicule in the breast of the populace and in the ranks of the profession as has the recital of the exploits of the three tailors of Dooley Street in a mirthful kindergarten of juveniles.

This resolution of active resistance we will at once enforce by throwing away the prudish reserve that has characterized the medical profession from time immemorial. It did not seem to have time nor disposition to resent an insult or right a wrong, even though inflicted on itself, so eager were its members to pursue their profession and follow landmarks, even though they have been pointed out as dangerous, mapped out under conditions that are at present inoperative. Yes, gentlemen, this prudish sense of personal reserve has emasculated the medical fraternity, and made its members an easy prey for the designing or ambitious, both inside and outside medical circles. Indeed, this same self-imposed reserve has always been a hindrance and a yoke about our neck to drag us down to the depths, often to shame and humiliation.

It has been a bugaboo and nightmare that has restrained our hands when our living and our honor were devoured and confiscated by a rapacious band of plunderers, known as advertising quacks and abortionists. We have been restrained from dealing with those social outlaws by an old etiquette imposed centuries long preceding, and which did not dream of or anticipate the boldness or effrontery that was to lie in wait for the profession. In it has been bequeathed to us a legacy of mortification and an inheritance of poverty. That professional reserve, imposed by the councils of antiquity—a traditional trait—has committed us to silence, and instructed us to bear great wrongs with resignation. The world is moving on, and we must move too, and the way for

us to move is to put away our old professional reserve, a relic of antiquity, in the urn with the ashes of departed friends, and live in the living present; and if it is necessary to fight to maintain a right, or right a wrong, to jump into the fray with a strong heart and hope of victory. The wavering remonstrances of impotency must be flung into the wastebasket with the profile of the governor who was cured of an incurable disease by the impudent quack and with the cards of the abortionist, which, through a vehicle of assumed respectability, he has been able to smuggle through the mails to our breakfast table.

To the determined man and cautious observer these creatures are not only vulnerable in the heel, but in every part of their cuticle, thick and impervious, though it is, to shame and every form of moral suasion. It can be easily proved that the advertising doctor secured the physiognomy of the governor and the clergyman, whom he didn't treat at all, by device and sharp practice, though they may not have been aware of the fact; he passes them through his many editions of the public press as those who have been cured by his infallible remedies, and as an invitation and a warning to those who need succor. The writer has knowledge of instances where emissaries of the quack are ever on the hunt for the simple or the mercenary that they may be used as a decoy to draw others into the enclosure, where they can be robbed and then ejected with the same immunity from punishment as the dive-keeper who administers knock-out drops to belated and muddled travellers who have been directed to his infamous resort by creatures in his employ under the very eye of the police and in the glare of the electric light. We see the young woman enter the door of the abortionist, and in a little while we will hear the chanting of prayers for the dead, or perhaps this rite may be denied her, and nothing left but a mole of earth and a pauper's grave. Let me ask you, gentlemen of this society, what occupation is more honorable and what calling more exalted than that of unearthing crime and dragging atrocious criminals to the bar of outraged justice? I know of none. Those men, as a disguise, call themselves physicians, that they may the more readily rob, and commit murder with impunity. The law has a strong arm, and is able to punish those men if their guilt that is so apparent to us can be proved in a court of equity. Let it be our mission to bring these scoundrels to the dock, and our pleasure to see them decorated with the regalia of the criminal—the stripes of the penitentiary uniform. The task is in every way one which can be accomplished by us if we only get our shoulders to the wheel, quit wrangling among ourselves, direct all our attention to the common foe, who, after all, consists only of a contingency of cunning and sneaking rascals, who will take to the woods the moment they see that we are sincere in our purpose, namely, to punish them for crimes they have committed and are still committing every day with impunity, under the very nose of a government which has promised to protect the innocent

and punish the guilty. In self-defence the government declares that it is powerless to punish these men because the proper evidence for conviction is lacking. Now, we will have to furnish this evidence, take the law at its word, and demand an exemplary punishment. We will succeed. The quack took money under false pretences from the men whom he fooled, by declaring he could cure an incurable disease; and the abortionist committed a murder, when he claimed sententiously to help a lady in distress.

We will now go into the open to do battle with the child-killer and advertising shark, who are both strangers to moral obligations, and outlaws and bandits against the interests of society, subsisting as they do on the misfortunes and credulity of mankind. These moral reptiles are ceaseless in their hunt for victims; they invade the sanctity of homes, to bribe the weak or persuade the wavering to be the subjects of a lying advertisement; they corrupt the press in order to have their false stories floated out upon a guileless and wondering world, which is almost struck dumb by the magnitude of their exploits. They command and receive aid from the clergy, the bench and the bar, while officers of the law wait on them with the fidelity of body-servants or footmen long in family service. The mission of the new medical dispensation is to point out to the people that the quacks and abortionists, illegal practitioners all, are their enemies as well as ours. Evidence enough to make this plain can be easily furnished if we apply ourselves to the task with half the zeal they do to their atrocious calling. We can accomplish this by making ourselves thoroughly acquainted with their manner of operation and the underhanded devices they call to their aid to placate or evade the law. That their sins will find them out is excellent reading for the Sunday School superintendent, as it has been a precedent and an excuse for the attitude of the medical profession in the past; but it has worked poorly so far as it relates to the illegal practitioners and quacks.

We now recognize the long-suffering of our trusting and patient brothers, and our attitude henceforth and to the end will be as avengers of our brothers who have suffered, and of the profession which lies prostrate and bleeding from the dagger-thrusts of medical thugs and assassins, who are registered in the archives of the State as regular practising physicians. We have repudiated them, and will resent the insults they have put upon us by speedily giving them their quietus. The attitude of the profession, then, to the illegal practitioners, as it should be, and as it will be, is like that of a household apprised of the intentions of a burglar, which is robbery and murder, a watchful and determined armed resistance.

51 Charlton Street, New York.

THE PLEA OF INSANITY IN MEDICAL JURISPRUDENCE.*

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THE plea of insanity is so frequently raised in our criminal courts, especially in trying capital crimes, that I need offer no apology for presenting a paper on the subject. The success with which the plea is urged in trying even the most atrocious and revolting crimes has aroused in the public mind a feeling of doubt as to whether the law is being properly administered and the ends of justice sufficiently served. As the plea of insanity is usually supported or opposed by medical testimony in the witness box, the issue of life or death to the prisoner and the enforcement or miscarriage of justice may be largely in proportion to the skill and honesty with which the medical witness submits his evidence.

It may be said that such momentous issues are usually settled in court on the testimony of the medical expert in mental disease, and that the subject is therefore of greater interest to the psychologist and student of mental science than to the general practitioner, and yet we know from experience that every physician is liable to be called upon to testify in regard to the mental responsibility of a person charged with crime, from a coroner's inquest up to a general court of assize. It becomes every physician then to acquire such a general and even special knowledge of the subject as to prepare him to acquit himself creditably in the witness box without bringing personal discredit on himself or the profession which he represents.

CONFLICTING TESTIMONY.

The old adage, that there are two sides to every question, is never more clearly demonstrated than in the unseemly confliction of medical testimony in the witness box, even by medical men supposedly eminent in their profession. A prisoner is on trial charged with the crime of murder. If he or his friends be possessed of sufficient means, the plea of insanity is set up, the most eminent criminal lawyer is engaged to conduct his defence, a large array of witnesses are summoned, including one or more medical experts, to sustain the plea. The Crown presents the case to the court and jury, supported it may be by the most positive evidence of guilt, and then the battle for truth and justice begins. One expert swears to one set of opinions, another swears to the very opposite. What each one is to swear has been all prearranged before he enters the witness box. The counsel for the defence is an adept in expert testimony himself, and has read up the authorities on the

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subject and been coached by the expert witnesses he has summoned as well. All the intricacies and subterfuges of medical and legal lore are presented to the jury to sustain the plea of mental irresponsibility, a large amount of technical evidence is submitted of which the jury know little or nothing, they become mystified by the confliction of medical evidence, doubt arises in their minds, they are thrown largely on the mercy of the court for direction, they retire to consider the case and return with a verdict of "not guilty," because of insanity.

Now, I do not mean to say that the verdict is an unjust one in every case—far from that; but I do say that justice often miscarries through the unseemly confliction of medical testimony, and our noble profession is not only discredited by the courts but by public opinion as well. The difficulty seems to be that the man of science, it may be unconsciously, degenerates into the advocate and allows his mind to be warped and prejudiced by the exigencies of the case and the determination to succeed of the side which summoned him; worse than all, shall I say, if his sordid nature has been appealed to and he is moved to testify in proportion to the size of his fee.

It may be said in justification that as mental alienation has not reached the standard of a positive or exact science, there is room for a wide divergence of honest opinion in regard to the complex problem of what constitutes normal or abnormal mentality. I freely admit that no scientist has ever been able to demonstrate the exact relation between mind and matter, that we cannot explain how nerve matter produces consciousness and probably never will; the histology of the nerve cell is still a matter of conjecture, and biology has not demonstrated a physical cause of life, but it is not necessary to have reached a finality on these psycho-physiological problems in order to agree upon what constitutes normal mental life. We each express ourself to the world according to certain mental, moral and social standards which may vary to a certain degree according to our environment, but every serious variation or departure from these standards is recognized by the psychologist as having its physical basis in some degeneration or malformation of brain, either hereditary or acquired, which makes the person so affected more or less irresponsible for his conduct in life.

Legal Test of Insanity.

There has been a long disagreement between the professions of law and medicine as to what constitutes mental responsibility in criminal offences. It is obvious that some legal test should be formulated into law or precedent by which to interpret this condition in the administration of justice. It has always been a matter of regret that, in framing a law which has necessarily to interpret a condition of mind peculiar to mental science, the advice of medical experts on the subject had not been taken.

The famous McNaghten case which was tried in 1843, was the

occasion of fixing a test which has been incorporated into English law and applied ever since in fixing the question of mental responsibility for the commission of crime.

Daniel McNaghten was tried at the Central Criminal Court in March, 1843, for the wilful murder of Edward Drummond, the private secretary of Sir Robert Peel. The judges before whom the case was tried were Lord Chief Justice Tindal, Mr. Justice Williams, and Mr. Justice Coleridge. The leading counsel for the prosecution was the Solicitor-General, Sir William Follett; whilst Mr. Cockburn, afterwards Lord Chief Justice, conducted the defence. Evidence was given to show that the prisoner shot Mr. Drummond in the back without any previous altercation on Mr. Drummond's part.

It appeared that the intention of the prisoner had been to shoot Sir Robert Peel, and that with that intention he had watched his house; and that seeing Mr. Drummond come out from Sir Robert Peel's house in Whitehall Gardens, he followed him and shot him under the mistaken belief that he was shooting Sir Robert Peel. Dr. Munro, who was the principal medical witness for the defence, testified that he had examined the prisoner, who said that he was persecuted by a system or crew at Glasgow, Edinburgh, Liverpool, London, and Boulogne, that the crew followed him wherever he went, that he had no peace of mind and that he was sure it would kill him. Mr. Cockburn then asked: "Is it consistent with the pathology of insanity that a partial delusion may exist, depriving a person of all self-control whilst the other faculties may be sound?" Witness: "Certainly; monomania may exist with general sanity." Dr. Munro was then cross-examined by the Solicitor-General, who asked: "May insanity exist with a normal perception of right and wrong?" Witness: "Yes, it is very common." Solicitor-General: "A person may have a delusion and know murder to be a crime?" Witness: "If there existed antecedent symptoms I should consider the murder to be an overt act, the crowning piece of insanity."

Re-examined by Mr. Cockburn: "You have not the slightest doubt that McNaghten's moral perceptions were impaired?" Dr. Munro: "Not the slightest; I think a delusion of this nature carries a man quite away. I mean that his mind was so absorbed by the contemplation of his fancied wrong that he did not distinguish between right and wrong." The jury returned a verdict of "not guilty" on the ground of insanity.

Very few days elapsed after the trial before the matter became the subject of debate in the House of Lords, and on the 6th of March Lord Brougham commenced the discussion by saying that in the event of the Lord Chancellor, or the Lord Chief Justice not agreeing that it was necessary to bring in a measure, or make some proposal relative to the law relating to crimes committed by persons alleged to be laboring under partial insanity, he should ask their lordships' attention to the subject.

The Lord Chancellor said that he had already turned his atten-

tion to the subject with a view to remedy the evil. Lord Campbell said that Lord Brougham used the words partial insanity, and it might be thought that persons laboring under partial insanity were relieved from all responsibility, but this was not the law. Lord Lyndhurst observed that those who are acquainted with the subject know how difficult it is to decide to what extent the moral sense and the moral feeling that guide men's actions are influenced by delusions. He also said with reference to the question of the advisability of attempting to frame a precise definition of insanity: "The result would be that your lordships would be satisfied that any attempt at a definition of the particular disease insanity would be altogether futile, and that the only course we can pursue is to lay down some general and comprehensive rule, and to leave those who administer the laws of the country to apply that rule."

Lord Brougham on the other hand said: "If the perpetrator knew what he was doing, if he had taken the precautions to accomplish his purpose, if he knew at the time of doing the desperate act that it was forbidden by law, that was his test of sanity; he cared not what judge gave another test, he should go down to his grave in the belief that it was the real, sound and consistent test." "He further maintained that they could only know one kind of right and wrong,—the right is when you act according to law, and the wrong is when you break it."

As a result of this discussion the House of Lords resolved to put certain questions to the judges. These questions were five in number, and were answered at length, only one judge dissenting. I regret that time forbids the reading of these questions and answers and must refer you to the law reports. The gist of the answers is embodied, however, in the answer to the second question, which is as follows:

"That to establish a defence on the ground of insanity it must be clearly proved that at the time of the committing of the act the accused party was laboring under such a defect of reason from disease of the mind, as not to know the nature and quality of the act he was doing, or if he did know it, that he did not know he was doing what was wrong." I need not say that the literal interpretation of this test of insanity would send every lunatic charged with a capital offence to the gallows. To the credit of the judges, be it said, many of them in both England and America have refused to recognize this legal test of mental responsibility, and yet less than three months ago, I heard a Canadian judge quote this test in directing the jury in the case of prisoner charged with shooting with intent where the plea of insanity was raised.

So eminent an authority as James F. Stephen in his "History of the Criminal Law of England," admits that the answers given by the judges when carefully considered leave untouched the most difficult questions connected with the subject and lay down propositions liable to be misunderstood. His words regarding self-control are also very important and are as follows: "The proposi-

tion then which I have to maintain and explain is that, if it is not, it ought to be the law of England that no act is a crime if the person who does it is, at the time when it is done, prevented either by defective mental power or by disease affecting his mind, from controlling his own conduct."

Mr. Justice Hawkins in 1885, at a murder trial, said: "It would be absurd to suppose that the prisoner could be held responsible for his actions, but the law with respect to the responsibility of criminal lunatics appeared to him to be in a very unsatisfactory state." Again he stated: "The judges generally had expressed similar opinions before, that the whole subject should be reconsidered and that they should have some better definition of what constituted a defence on the ground of insanity."

At the Chester assizes in 1884, before Mr. Justice Cave, the counsel for the prosecution was about to address the jury as to whether the prisoner was capable of appreciating the difference between right and wrong. But his Lordship replied, "No. The question is whether he was insane at the time. If a man is suffering from a delusion that his wife is going to poison him, or is unfaithful to him, and he attacks her with a scraper, it is as clear as possible that he is mad. In this case the man without doubt knew the difference between right and wrong, and thought he had done an act for which he would be sent to the gallows."

At the trial of David Davies, at the Glanmorganshire assizes, in 1888, Mr. Justice Stephen is reported to have said, in his charge to the jury: "I wish if possible to show you what the law is in regard to cases of this kind, more for the sake of giving general information on the subject than for its general application to this case. It is an opinion held by a certain number of medical men in respect to the law obtaining in these cases that it is unreasonable and unjust. I do not desire to enter into the merits of the dispute, except so far as to express myself sorry that such a difference of opinion should exist between the two great professions—the medical and legal professions. It is said that according to the law a man is responsible for his acts when he knows that the act is wrong, and that is true. Now, medical men frequently say that many persons who are really mad do know that the act is wrong. He then proceeded to lay down certain principles, defining what constituted a knowledge of right and wrong, for the purpose, he said, of removing a misconception between two great professions."

More than half a century has elapsed since this legal test was formulated, and great advance has been made during that time in psychology and mental pathology as well. The time has come for the repeal of this antiquated and unscientific law, and the substitution for it of a law based on the latest exposition of mental science. Every physician who has experience in the care and treatment of the insane knows that a large proportion of them have a rational knowledge of the nature and quality of every act they perform, and can also distinguish between right and wrong in the acts which constitute the sum of their daily experience.

Every person, sane or insane, commits acts which he knows to be wrong, but the difference between the two is this, that the sane person has the mental power to resist doing wrong while the insane person may not, and therein lies the whole test of mental responsibility.

Psychological Test of Insanity.

That man expresses himself to his environment, normally or abnormally, in direct ratio to the physiological or pathological integrity of brain matter is a well demonstrated fact in mental science. The delicate and complex organism of the brain, with its wide divergence of natural gifts and endowments, both congenital and acquired, afford a wide scope of mental activity and intellectual expression of man in his relation to his fellowman. Amid such diversity of gifts and endowments it is difficult to set up a universal standard of normal mentality and say that every variation from that standard is evidence of insanity. We are forced to generalize from long experience and advancing civilization man's ethical relation to his moral and social environment. As men of science it is our business to interpret man's ability or disability to conform to those laws on a physical basis of disease, either congenital or acquired.

We do not pretend to explain the mysterious relation between the nerve cells of the brain and consciousness, but we do know that normal consciousness can only exist as a condition of healthy brain matter—by consciousness I mean a knowledge of our existence and our relation to the world in general. Two great functional processes are the concomitants of this condition, viz., ideation and volition, each represented by its sensory and motor system of nerves by which man manifests himself rationally or irrationally to the world. Every sensory impression received from the outside world through the channels of the senses is conveyed to the brain and results in a concept or idea, which may be either stored up in consciousness as a memory or discharged through the motor system in an expression of speech or other muscular act. When a proper equilibrium exists between these two mental processes the person may be said to be in a condition of normal consciousness or sanity.

That there is a controlling, comparing and reflecting centre which presides over these mental activities we have abundant evidence. This is the reasoning inhibitory centre which adjusts and determines every mental and physical process. The theologian will say that here presides

> "A Divinity which shapes our ends,
> Rough hew them how we will;"

while the materialist scoffs and says it is only the outcome of molecular activity. It is not our purpose to enter into a polemic discussion about immortality, but content ourselves with tracing the mortal through the devious paths which beset him, and find out

when he ceases through physical disease of his brain to be responsible for his acts.

It may be said that all insanity is the result of a disturbance in this equilibriating power. The mental equation between thinking and acting is unbalanced either in regard to quantity or quality and is therefore plus or minus. The delicate structure of the brain and its membranes is peculiarly susceptible to functional disorder and disease. It may be only functional from imperfect nutrition, it may be necrotic from insufficient blood supply, or it may be sclerotic degeneration from a local inflammatory process, the result of toxemia. Whatever the cause, it at once manifests itself in mental or motor disturbance in direct relation to the pathological cause.

Delusions.

It may be said that every insane person who commits crime, is impelled to do so through the indulgence of one or more delusions. These delusions may be acute or chronic. The acute form of delusion is usually that of persecution, jealousy or poisoning, and is often associated with hallucinations of hearing. Each one of these types is represented at present in the Hamilton asylum, and I shall instance a few cases to illustrate.

One had the delusion he was persecuted by the Freemasons, and shot his supposed persecutors, killing one man and wounding others. He was acquitted on the plea of insanity.

Another in a fit of jealousy shot his sweetheart going home from church because she jilted him and went with another fellow. Also acquitted on the plea of insanity.

Another shot at his physician who was giving him medicine, under a delusion that he was poisoning him. Also acquitted and sent to the asylum.

Chronic delusions are peculiar to the paranoiac and may be of a religious or persecutory type, or perhaps of perverted affection. A woman at present in the Hamilton asylum strangled a fellow-patient to death because the Lord commanded her to do it.

Another woman in this city strangled her three children to death, under the apprehension or delusion that they might grow up to be wicked.

A young woman shot her sister, with whom she lived in a town near by, on terms of natural affection. Her sister became engaged to be married, and she indulged the delusion that her sister's affection would be estranged from her to her husband, and she preferred to kill her, rather than have her sister's affections divided.

According to legal test each one of the cases cited would have been sent to the gallows. They all knew the nature and quality of the act, and they also knew that what they did was wrong, for they have all told me so; therefore, that is no test of their responsibility. Each one of them was impelled by an imperative idea

which he or she was powerless to control. The equilibrium between ideation and volition was destroyed, the higher centre of reason and inhibitory power over the will was gone, and the person's mind became dominated by an irresistible impulse from which he could not escape. The suicidal impulse, I believe, is very much akin to this, except that there may be no delusion. The deed may be done under a sudden impulse, especially from alcoholism, but more often, I believe, it is premeditated for a longer period. The victim is the subject of an impelling force to self-destruction, which he may successfully resist for a longer or shorter period. Some unfortunate circumstance may arise which destroys the balance between the impelling and resisting forces, and the deed is done.

Monomania.

Monomania or partial insanity was first used in the nomenclature of the subject by Esquirol more than half a century ago, and has ever since been recognized by alienists as a distinctive clinical form of insanity. As the name indicates, a person may be insane on one subject, and perfectly sane on every other, and much discussion has arisen as to the degree of responsibility in a person affected by this form of mania. At the present day the best authorities deny the existence of such a form of insanity. They say that its clinical manifestation is only the first link in the chain of mental degeneration, which ends by due process of time in terminal dementia; that it has a physical basis in pathological disease of brain tissue which is progressive, and will eventually involve the whole centre radically or sympathetically. Sir Charles Hood, who had McNaghten under his care for ten years, testified before the Capital Punishment Commission in 1865, that he was, undoubtedly, insane, and that his mind gradually decayed from the ordinary course of brain disease. That this is the clinical record of a large proportion of so-called monomaniacs is undoubtedly true, and yet every one who has had large experience in the treatment of the insane can point to many exceptions to this rule. I have known cases of monomania which were due to purely functional disorder which ended in recovery. I also know of cases of monomania that are stationary and not progressive, and who enjoy perfect physical health.

I propose now to cite two cases at present in the Hamilton asylum to illustrate the two mental conditions I have indicated.

Case 1. E. C., farmer, aged 45, admitted to the asylum from the County of Simcoe, July 18th, 1891. His general appearance is that of a respectable, intelligent farmer, and a class-leader and Sunday School teacher in the Methodist Church. The medical certificates certify that he is suffering from monomania, that he has the delusion that his wife is unfaithful to him. On examination I discovered that he held this opinion strongly, but he protested that it was not a delusion, that he had seen it with his own eyes, and gave dates and occasions and names of men that he had seen in

crim. con. relations with his wife. His friends took up his case, and sent a lawyer to see me, who assured me it was a put up job on the part of his wife to put him in the asylum to get him out of the way. As I had no means of satisfying that it was a delusion, and as he was perfectly sane on every other subject, I decided to give him the benefit of the doubt, and I discharged him as not insane, after he had been twenty-one days in the asylum. He returned home and horsewhipped his wife, and several of his neighbors were called in to protect her, and among them were the men whom he alleged had criminal relations with his wife. He then entered an action against these men, claiming $10,000 damages. He testified in the witness box himself against these men, and gave dates and occasions on which he had caught them in the very act. I was summoned as a witness at the trial, and after hearing the evidence had no hesitation in swearing that he was suffering from monomania. It came out in evidence that he had a revolver with him, which he stated was for the purpose of protecting himself against these men, and there is little doubt he would have used it had he considered it necessary. The case broke down, and he was immediately put under arrest, and sent back to the asylum on April 7th, 1892, where he still remains. He has undergone a gradual process of mental degeneration, and has developed many other delusions which renders his case a hopeless one.

Case 2. G. N. A., a farmer, aged 47, admitted to the Hamilton asylum, March 5th, 1892, and certified to be a religious maniac In religion he claimed to be an Israelite, a disciple of Prince Michael, and had followed him to Detroit, where he got into trouble and was arrested. His friends brought him back to Canada, and he was sent to the asylum. He has a fixed delusion that he is the Messiah, but on every other subject is perfectly rational. Is very intelligent and trustworthy, and takes a general interest in everything that is going on, and reasons soundly on every subject outside his delusion. He is an intense egoist, but as he believes himself to be the wisest man living, it is not inconsistent with his delusion. He is careful not to thrust his religious views upon people, and to those unacquainted with his delusion, he passes as a perfectly sane man. He enjoys perfect physical health, and has shown no evidence of mental degeneration during the seven years he has been in the asylum. He writes letters frequently to his friends, and invariably signs himself Joseph, The Messiah. Only on one occasion was he ever known to sign his real name, and that was when applying for a vacant position at the asylum, showing that he distinguished between business and religious affairs.

Homicidal Impulse.

I propose now to show the intimate relation of cause and effect between chronic alcoholism and the homicidal impulse, or as I prefer to call it, transitory mania. I call it transitory in the sense that if the person is confined and the alcohol is withheld, and too

great damage has not been done to the brain the person recovers. The question of mental responsibility for a criminal act while in this condition is a long and vexed one. That the person is *de facto* insane while in this condition cannot be doubted, but whether a person should be held responsible for a criminal act induced through a voluntary habit which he has power to control is another matter. The law is generally adverse to acquittal when crime is committed from insanity produced by alcohol, and properly so, but there may be cases where it would be a hardship to apply an inflexible rule. There is no better test of the strength and stability of a man's brain than in the way it is affected by alcohol. Some men can drink to excess for years with comparative impunity, while others are born into the world with a weak, unstable brain, perhaps of hereditary taint, or a neuropathic diathesis which makes them peculiarly susceptible to alcohol or any other toxic agent. It would, therefore, be scarcely fair to interpret crime committed by the latter class in the same terms of responsibility which would attach to the former class.

It is in such cases as these that the evidence of the medical expert is valuable in determining the degree of responsibility. A hard and fast law which has no scientific basis of interpretation may do great justice to a weak and irresponsible class.

I shall now cite four cases which have recently come under my observation to illustrate my contention that homicidal impulse is frequently a transitory mania induced by chronic alcoholism which terminates in recovery by abstinence.

Case 1. U. L., aged 33, single, a farmer living eight miles from the town of B. One morning he took his gun and walked into the town, and stationed himself on the main street and began to shoot indiscriminately at every person who came within range of his gun. One man was fatally shot and others were severely wounded. He was tried for murder and acquitted on the plea of insanity. On the 15th of July, 1896, he was sent to the Hamilton asylum, four months after the commission of the deed, and has remained there ever since. The evidence at the trial went to show that he had been intemperate for years, though the prosecution failed to prove that he had been drinking on the day of the shooting. Some time before he had been in the town in a drunken condition, and had an altercation with a policeman who tried to arrest him. The medical evidence went to show that he was a paranoiac and had fixed delusions of persecution.

His appearance and condition when admitted to the asylum was that of a good-looking, bright, intelligent-looking man, of good address and affable manner, and he has maintained that impression throughout the three years he has been an inmate of the asylum. He is polite, industrious and exemplary in his conduct in every respect, and has never required the slightest discipline.

When admitted he underwent a searching examination by myself and medical staff, and we failed to elicit the slightest evidence

of insanity. He disavowed all recollection of the deed, but whether this was feigned or real it is impossible to say. I am of opinion that a condition of subconsciousness or double personality is quite compatible with the frenzied mental condition he was in at the time of the shooting. He admits that he was a steady drinker and often got on sprees with the boys, and also kept liquor in the house. That he was peculiarly susceptible to its toxic effect, the result of an emotional and neuropathic temperament, I verily believe, for complete abstinence has enabled him to resume his normal mental condition, and he is now perfectly sane.

Case 2. R. F. T., aged 39, employed as hostler, was tried at the Toronto assizes last January for the murder of his wife by fracturing her skull with a hammer. He was acquitted on the plea of insanity and sent to the Hamilton asylum on February 10th last. His appearance on admission was that of a dull, phlegmatic person of a rather low intellectual type. He was submitted to a thorough examination, and after being assured that any statement he might make would not jeapordize his future in any way, he gave a full history of his life and all the circumstances which led up to the murder. He admitted he had been a hard drinker for years, and did not properly provide for his wife and family. That in consequence of these habits his wife had turned him out of the house and forbidden him to enter it again. He had made repeated attempts to enter the house for the purpose of seeing his children, but each time had been forbidden by his wife from seeing them. He determined to have revenge upon her and began to premeditate murder, and at the same time intended to kill her mother, with whom she lived. His first impulse was to shoot them, but he had not money enough to buy a revolver, so he bought a hammer as more within the compass of his means, which were never very flush, for he admitted he spent the most of his earnings for liquor.

The medical evidence went to show that he was subject to hallucinations, masked epilepsy, etc., and that he would quickly degenerate into a condition of hopeless dementia. He has now been four months in the asylum and has shown no sign of insanity. He is very quiet and industrious, and adapts himself to the ordinary routine of asylum life without a word of complaint. I have not the slightest doubt that the prolonged use of alcohol debased this man's moral nature and weakened his will power to such a degree that he became the victim of an uncontrollable impulse which he was powerless to resist. He is now thoroughly sobered up and has resumed his normal mental functions, and expresses the deepest contrition for the terrible deed he committed.

Case 3. G. W. C., a farmer, was tried at the fall assizes for the County of Lincoln last year, charged with shooting with intent. The history of the case in brief is this: He was a prosperous fruit farmer, but of late years became addicted to drink; his business was neglected, which led to financial embarrassment and family feuds. In a dispute over business affairs between his wife

son and himself, he drew a revolver out of his pocket and fired first at his wife, the ball shattering her arm at the elbow; then he shot his son, the ball striking against a hand file in his vest pocket which deflected the course of the ball and saved his life. He then tried to shoot himself, but the ball passed through the left sleeve of his coat between the elbow and shoulder.

At the trial the insanity plea was raised and was sustained by medical evidence. The jury disagreed and the prisoner was remanded to jail to await a new trial at the spring assizes last March. By order of the Attorney-General I went to examine him a few days before the trial. I found him perfectly rational, but he denied all recollection of the shooting. I was summoned as a witness by the Crown, and testified that after ten months in jail he was perfectly rational, and that in my opinion the act was a homicidal impulse the result of chronic alcoholism. The jury found him guilty with a recommendation to mercy, and he was sentenced to six years in the penitentiary.

What I wish to point out is the unequal administration of the law in the three cases already quoted. In the first case one man was fatally shot and others were maimed, one almost fatally. In the second case the prisoner brutally murdered his wife with a hammer. Both prisoners were acquitted on the plea of insanity. In the third case no person was killed, one person suffered only temporary injury, and yet the prisoner was sent to the penitentiary for six years.

Now, I believe the mental condition in each of these three cases at the time the deed was committed was alike, or nearly so, and that the cause which led up to that condition was also alike; and yet the first two, who committed murder, are putting in a comfortable time in the asylum in a condition of perfect sanity, while the latter case is serving the penalty of his crime in the penitentiary.

Case 4. B. P., aged 32, a carter, was tried at the last assize in Hamilton, charged with matricide. In a quarrel with his mother he seized an axe and inflicted several fatal blows on her head, from which she died very shortly. The plea of insanity was set up, and Dr. Clark, of Toronto Asylum, and myself, were ordered by the Attorney-General to examine him on behalf of the defence. I was summoned as a witness at the trial by the defence, but was not put in the witness box, I presume because it was thought my evidence was not favorable to their plea. I found the prisoner of a low intellectual order, and his moral sense of a still lower grade. He at first denied all recollection of the deed and was ready to fence and equivocate, but after a sharp examination by Dr. Clark and myself he confessed to the deed and told us all about it. He expressed himself in the most brutal terms about his mother, justified the deed and said it should have been done long ago. He admitted he had been a hard drinker for years and had been drinking the day the murder was committed. He expressed no fear of death and said he might as well die now as later.

No medical evidence was offered by the defence, and the trial only lasted about four hours. He was found guilty and sentenced to be hanged on the 23rd of June.

I propose now to draw a parallel between this case and Case 2, to show how differently the law is administered under somewhat analogous circumstances and conditions. In intelligence and moral sense they were each on about the same plane. I have no knowledge of the heredity of Case 2, but in Case 4 it was of the worst possible character; his mother was a hard drinker, his moral and social environment from his birth upward was bad. They have each a brother in the asylum, one in Toronto and the other in Hamilton. The motive in each case was admittedly revenge from their own lips, and equal in brutality; the one knocked his wife's brains out with a hammer, and the other knocked his mother's brains out with an axe.

The trial of Case 2 lasted for several days, and the defence was sustained by strong medical testimony. The prisoner was acquitted on the plea of insanity and sent to the asylum.

In Case 4 the trial only lasted four hours, no medical testimony for the defence was called, the prisoner was found guilty and sent to the gallows. Now, I do not mean to say that the latter sentence was an unjust one, but I do say after a thorough examination of the latter case the day before his trial, and an equally thorough examination of Case 2 a few days after his trial, that one or other of the verdicts was unjust.

A Medical Commission.

I have long thought that a medical commission composed of men of high standing and long experience in their profession, should be appointed by the Crown to examine all prisoners charged with capital crime where the plea of insanity is set up. I am also of opinion that when insanity is alleged, a sufficient length of time should elapse between the commission of the crime and the trial to enable the examiners at intervals to study the nature and progress of the case and thereby reach a conclusion beyond the region of doubt. This would abolish the too often unseemly confliction of medical evidence on opposite sides of cases, each making admissions and statements under the tortuous cross-examination of clever counsel which they never intended to make, and yet so prejudicing the case for or against the prisoner as to make the issue one of life or death.

It would also abolish the tendency of medical witnesses to unduly identify themselves with the side which calls them, and perhaps unconsciously to allow prejudice to sway conviction. It would be a protection to the poor man who has neither money nor friends to engage clever counsel and able medical testimony in his behalf. It would also satisfy the public mind, which is ever sensitive in regard to the righteous punishment of crime, that justice has been done and the law vindicated. There is a growing feeling

in the public mind that too many guilty criminals go unpunished by the success with which the insanity plea is urged in court. Any measure which would tend to disarm this opinion and increase public confidence in the justice and integrity of our criminal courts should command our wisest and best consideration.

SOME OPINIONS ON "NO EVIDENCE IN AMERICA OF PRECOLUMBIAN LEPROSY."

BY ALBERT S. ASHMEAD, M.D., NEW YORK.

I SUBMIT the following opinions:

From D. S. Lamb, M.D., Washington, D.C.:

"'No Evidence, etc., Leprosy,' read with interest. Have you examined the mummies in the Army Medical Museum? I presume, however, that they would show nothing new."

From Gustav. Bruhl, M.D., LL.D., Cincinnati, Ohio:

"I have received your very interesting paper on 'Pre-Columbian Leprosy,' and read it with the greatest pleasure. It strikes me that your arguments are very forcible and convincing. My sincerest thanks for the welcome gift."

From Prof. Henry C. Mercer, Archæological Department University of Pennsylvania:

"Please accept my best thanks for your valuable paper on 'The Non-Existence of Pre-Columbian Leprosy,' which I am reading with much interest and pleasure."

From Rev. L. W. Mulhane (Author of "Leprosy and the Charity of the Church"), Mt. Vernon, Ohio:

"I thought my name had passed from your busy brain, but it has not, I am glad to say. Your interesting pages on 'No Evidence in America of Pre-Columbian Leprosy,' read with pleasure. Let me say, I admire your persistency in keeping at your proposition, and piling proof upon proof. The supposed leper girl here in Ohio died last week—older one—*vide* my book, page 30."

From Prof. Alfred Steele, M.D., LL.D., 3900 Spruce Street, Philadelphia, Pa.

"I have read your recent pamphlet on 'The Leprosy Question,' and with much interest. You seem to me to have made a substantial plea against the opinion that leprosy existed in America at the time of Columbus' voyages. It seems to be as thorny a question as the American origin of syphilis. The origin of all communicable diseases is mysterious. I have tried unsuccessfully

to discover the *causa causans* of typhoid fever. I do not mean the specific microbe, but that which produces the microbe."

From Clarence B. Moore, 1321 Locust Street, Philadelphia, May 15th, 1899.

"I have been prosecuting my work all winter among the mounds of the Alabama River. I find, while south, it is inadvisable to have printed matter forwarded, as I am going from place to place, and I am very likely to lose it This must be my excuse for not acknowledging before your interesting 'No Evidence in America of Pre-Columbian Leprosy,' in which you make a very strong case, and which I have read with much pleasure."

From Dr. Felix Regnault ("Syphilis in Peruvian Art"), *Le Correspondant Medical,* May 31st, 1899.

"When searching for remains in the cemeteries of ancient Peru, one finds near a mummy all the objects which it used during life. Pious hands placed near it what was necessary for the eternal voyage. Drink in particular was necessary in a dry country, and so great care was exercised in placing within reach a number of drinking vessels. These earthenware vessels were shaped like human beings. Similarly the Egyptians placed little statues in tombs, and the Greek tiles found in the tombs of Tanagras excite our admiration even to-day. Historians agree that these Egyptian and Grecian images were the surviving doubles of the departed. Death was not certain until these little statues had disappeared. This belief in a double, which was widely spread among all nations, existed in Peru. To satisfy it they found it suited their purpose to change a drinking vessel into a double, that is to say, into an image resembling the departed. These earthenware statues also have an appearance of truthfulness to nature, which is pleasing to an artist. They are of varied kinds, from the child and the woman to the old man; from the fat man to the thin one; with all the facial expressions representing sadness, joy, anger, etc.

"Sometimes these figures have ear pendants or have the nasal septum perforated for the passage of a ring. (Numbers 2,131 *Vit.* (sic) XVII., and 4,402 *Vit.* XIX., Trocadéro Museum.)

"Some earthenware specimens even show signs of disease. We have already shown (V. Number 110) a double hare-lip. Syphilitic lesions are also quite common. It is well known that the latter disease was brought from America, where it was very commonly disseminated, so much so, indeed, that the Mexicans had deified it under the name of the God Nanahuatl. And Mantegazza relates ("L'Amour dans l'humanité," p. 123) that in the guano on the Chinchas Islands figures in wood have been found exhibiting on the neck a serpent devouring the virile member. The serpent also devoured the face, as one may observe in a series of figures preserved in the Trocadéro Museum. These five Peruvian vases, presented by Mr. A. Drouillon, come from Mocha. All of them

exhibit in varying degrees destructive lesions of the upper lip and nose.

"In the first one the extremity of the nose (septum and alæ nasi) is destroyed. There is no other change. The rest of the nose and the upper lip are intact.*

"The second had suffered from a limited destruction of the middle of the upper lip; a portion of it in the shape of an angular notch, the top of which is close to the septum, has disappeared, exposing the gums and the teeth which have remained sound. The borders of the lesion are clear-cut and appear cicatrised; the nose appears sound, although the alæ nasi are very not ably elevated.†

"The third subject has suffered from a more serious change. The upper lip is eaten away up to the nose, exposing the red and bleeding gums. A full set of teeth are present, but the tip of the nose is gone; the nose itself is extremely short, and looks upwards.‡

"The fourth earthenware specimen is most interesting. There has been necrosis and excavation of the superior maxillary bone, which has sunk beneath the level of the inferior maxillary bone, and the latter projects in front. A tough, inextensible scar tissue has been formed there, which exposes the teeth and closes the openings of the nostrils. The lower eyelid of the right eye, drawn down by the scar tissue, exposes the ball of the eye, while the left eye is normal.§

"The last specimen of earthenware represents a mother holding her child in her arms. She also exhibits an excavation of the superior maxillary bone; but the root of her nose is destroyed and its sound tip is sunken.‖ This shape of nose is well described by Mr. Fournier.

"Similar earthenware figures are common enough; there are some in the La Plata Museum. A fine collection of photographs from the latter museum is shown at the Trocadéro. In Number 32,141 is seen an individual who has lost his nose; in 32,144, a person whose face is covered with a smooth, even, tough skin resembling sclerous tissue. His mouth is contracted and reduced to a very small opening; the lips, having lost their elasticity, can neither open nor shut, and the teeth remain exposed. Certain kinds of lupus look like this representation. In America, Mr. Ashmead (CANADIAN JOURNAL OF MEDICINE AND SURGERY, March, 1899) has studied similar specimens of pottery, which have been found at Huaco, Peru.

"Mr. Virchow was of the opinion that on these pots he recognized the signs of leprosy. Mr. Ashmead thought that they really

* Peruvian vase from Mocha (Trocadéro Museum). The extremity of the nose is destroyed.

† Limited destruction of the upper lip.

‡ The upper lip is eaten away.

§ Scar resulting from necrosis of the superior maxillary bone.

‖ Nose excavated at the root.

represented syphilis, because in these pots, as in ours, the upper lip is retracted and eaten away, a characteristic which does not exist in leprosy; the face does not show any tubercles and the hands, which are so often affected in lepers, are intact. The pots of the Trocadéro Museum offer stronger proof still in favor of syphilis; the multiple lesions of the nose are characteristic of that disease. If there is any doubt, it is in favor of lupus rather than leprosy in the fourth subject. Similarly the subject from the La Plata Museum, with retraction of the skin of the face, might also have been affected with lupus.

"A last argument is supplied by an examination of thousands of pre-Columbian skeletons. Not one of these exhibits a lesion traceable to leprosy, and many of them show signs of syphilis.

"The skill of these Peruvian artists who have succeeded in giving good representations of the ulcerative lesions of syphilis, is worthy of admiration."

From Vicente Restrepo, Bogota, Colombia (article, "Fue Conocidæ la lepra en America, antes del descubrimients?" May, 1899).

"In April, 1895, there was raised in Berlin,* the question whether leprosy existed in America before the discovery. Giving origin to this debate, the fact had been noted in Peru of some ancient vases of clay which were of human form, with mutilations on the nose and upper lip. The subject has since been discussed by wise Europeans and Americans (*sic*). Dr. Juan de Dios Carrasquilla took an active part in the debate, sustaining the negative and affirming that the alterations of the face which were observed in various pieces of Peruvian ceramics, could not be attributed to leprosy." (Dr. Carrasquilla took no part at all in the debate in the Leprosy Conference of Berlin on Dr. Ashmead's paper, "The Question of Pre-Columbian Leprosy in America, with some Huacos Pottery." Virchow and Polakowsky alone spoke. Nor did Carrasquilla take any part in the Anthropological debates in Berlin Anthropological Society.—A. S. Ashmead.) "Excited by this friend to an expression of my opinion on the point so interesting to science and history, I furnish the word, which gives it what it is worth. 'Colombia' is the country of the world where leprosy makes greatest ravages. This dreadful calamity has invaded all the departments of its extensive territory, and is propagating itself in alarming progression. Was this evil known to the aborigines of our country? I contend negatively without any hesitation. Read the chronicles and all the documents relating to the conquest, and in them there is not found any mention of leprosy. Examine the works of ceramic and of gold of the natives, and there is not seen any human figure which recalls, even to-day, the mysterious evil. Inspect the vocabularies of the native languages, and it will be remarked that they do not contain proper words to designate leprosy, and so for carate, scrofula, pleurisy, fevers, llagas and

*By Dr. Albert S. Ashmead.

other diseases. Even more, the pure tribes which exist to-day in the nation were free of the afflictive plague, as can be proved by the reader of the numerous writers of narratives of the foreign and Colombian travellers, who have visited them." . . .

"I am in accord with the author (Ashmead: 'No Evidence of Pre-Columbian Leprosy,' CANADIAN JOURNAL OF MEDICINE AND SURGERY), and to end it only remains for me to say two words on the pieces of Peruvian pottery that I have mentioned at the beginning of this article, and whose plates, published in La Plata, Argentina, by Dr. Robert Lehmann-Mitsche, I have seen. The eminent Dr. Hansen has expressed his opinion on these pieces in these words: 'As regards the photographs of Peruvian vases, I can only say that the faces do not present any signs of leprosy; the noses appear mutilated on the extremity, tubercles do not exist, nor phenomena of anesthesia.' (Private letter to Dr. Ashmead.)

"Other physicians and savants have written holding the same opinion: Brinton, Ashmead, Polakowsky, Glück, Sommer, Valdez-Morel, Carrasquilla, Lehmann-Mitsche, etc. Hence the human figures represented on the Peruvian vases do not show leprosy. I leave to the savants to decide whether they are artificial mutilation or some other known disease."

Saline Solution Quickly Absorbed.—S. Marx, M.D., of New York, declares that it is remarkable how much salt water the colon will quickly and almost greedily absorb. In a case of collapse after labor, one pint of saline solution was injected hourly for twenty-four hours, and being readily absorbed the patient quickly rallied.

An Unfeeling Jest.—From St. Louis, Missouri, to India and back is a long way, but the *Indian Medical Record* for February 1st is responsible for the following: "Doctor," said Pat to Dr. Marks, of the St. Louis City Hospital, "I hain't had no feelin' in this yere leg for twenty years." "Well, let's see it," replied the doctor. And Pat, pulling up his trousers, exhibited a wooden leg.

Epididymitis.—Twenty cases of epididymitis successfully treated by the local application of guaiacol, one cubic centimetre of the drug being painted over the cord, and one cubic centimetre dissolved in two cubic centimetres of glycerin over the inflamed testicle. It is usually necessary to renew the application every day for several days.—J. CLIFFORD PERRY, *Medical Record*, January 7th, 1899.

Another Accusation Against Tea.—Tea and coffee are accused of producing many evil effects on the vital functions of the human body and doubtless with good reason. The most recent accusation against tea is that its continued use is a frequent cause of rheumatism, owing to the fact that its alkaloid, theine, inhibits the excretion of uric acid and urates, thus laying the foundation of the lithemic diathesis.

Medicine.

. . . IN CHARGE OF . . .
J. J. CASSIDY, M.D., AND W. J. WILSON, M.D.

CURE OF MORPHINE, CHLORAL, AND COCAINE HABITS BY SODIUM BROMIDE.

BY NEIL MACLEOD, M.D., SHANGHAI.

In the *British Medical Journal* of July 10th, 1897, two pronounced cases of morphine habit were recorded as cured by treatment with bromide of sodium administered, so far as I am aware, in a novel way. Further trial of the treatment there described has met with equally satisfactory results in cases of morphine, chloral, and cocaine habits, and an improved method in the use of the bromide has been adopted, so that large doses of the different drugs were cut off within three days without suffering, and the length of the treatment somewhat curtailed. The cases are recorded in the order of their occurrence.

Case 3. A Chinaman, aged 32, was educated in America, where he contracted the chloral habit. This habit had lasted four years when his parents brought him to me for treatment. They described him as crazy at times, wandering away from home improperly clad and in all weathers; bemoaned his loss of several lucrative posts in consequence of the habit, and expressed their willingness to submit him to any treatment which would afford a prospect of removing the craving for chloral. The patient himself, a broken-down-looking subject, desired relief, but acknowledged that no reliance could be placed on his promises of assistance towards that end. Circumstances prevented his remaining in the hospital, and I hesitated to undertake the treatment without European nurses in a Chinese house, but his parents, to whom I explained that he might injure himself when the effect of the bromide was passing off, and that careful nursing would be required, undertook all responsibility, and guaranteed that he would never be left alone. As I feared, the mother, who was responsible for the bromide administration, did not give it in the doses and at the times ordered, but I was enabled to determine with certainty that thirty-three drachms were given between November 9th and the 13th, during and after which time no other drug was given. He slept continuously from the 13th to the 21st, taking about two pints of milk daily. During this time no communication with him was possible. Until December 1st there were the same feeble motor, mental, and emotional manifestations as described in the first paper, recovery

being slower and delusions of fear more marked. When he recovered his power of locomotion, notwithstanding repeated warnings that he was to be watched carefully in reference to stairs, windows, and veranda, there being delusions of persecutions at times, on December 10th he succeeded in getting through a window and fell from the first floor, fracturing the left tibia and fibula. He was removed to hospital, and the leg was put up in a plaster splint. He returned home on December 30th, quite recovered from the effect of the bromide and without any return of the chloral craving. He has remained free from it for a year, and for some time has been occuping a responsible well-paid post.

No reliance could be placed on his statements as to the dosage of chloral in twenty-four hours, as he continued to drink from a chloral draught when under its influence. It was obtained from a Chinese source. Comparing this with the two previously recorded cases, I suspected that the slow development of the bromide sleep was due to the method of administration This suspicion was confirmed in the next three cases, where the drug was pushed more boldly, with the result expected, and further justified in two other cases to be later referred to, in which the bromide sleep was produced in the treatment of other abnormal states. As will be seen, it was possible for the morphine to be withdrawn more rapidly than in the first two cases.

Case 4 was one of the morphine habit, in a lady aged 48, whose medical attendant furnished me with the following remarkable history:

Family History.—Father died, aged 70, of cerebral hemorrhage. Mother living, aged about seventy, subject to migraine. (1) Brother, paroxysmal oinomania, suicide. (2) Brother, alcoholic. (3) Brother, paroxysmal oinomania. (4) Brother, alcoholic. (5) Brother, good health, sound nervous system. (1) Sister died, aged about forty, of pulmonary tuberculosis after many years' suffering from hysterical disorders, anorexia, etc. (2) Sister died, aged about thirty-five, of morbus cordis, consequent on rheumatism; sound nervous system. (3) Sister living, in good health, was laid up for two years with a knee-joint affection, probably hysterical. The patient herself is the eldest of the family. History of alcoholism in previous generations and collaterals.

Early History.—Shortly after the onset of menstruation she suffered from hysterical edema of the breasts. She has all her life been subject to periodic illness from neuralgia, in various sites, most often gastric. About twenty years ago was laid up for many months after an injury to the knee, the long duration of which was probably dependent on neurosis. First married in 1875, and lived in Japan till her husband's death in 1884. She never became pregnant during that time. About 1880 she suffered from hysterical edema of the feet, which she has had in slight degree occasionally since then. She became a nurse in 1885, suffering only from migraine at each menstruation. Morphine had to be given in 1890

for severe trigeminal neuralgia with and without facial cramp, or for gastric pain and vomiting, requiring larger than medicinal doses in 1893, in which year she became pregnant, and severe vomiting set in, requiring morphine in increasing doses, up to four and five grains, before confinement, and continued till April, when it was discontinued, with the aid of bromide, and only given during the next two years during menstruation. "In the second month of pregnancy she became insane, the insanity taking the form of morbid jealousy and of intense dissatisfaction with all her surroundings. In the autumn of 1894 paroxysmal oinomania became a serious trouble. An irresistible craving for alcohol would seize the patient. The gratification of this craving would give rise not to drunkenness, but to *mania a potu*, transitory acute mania, lasting perhaps twelve hours. In one of these attacks she thrust her hand through a window, in another she threw a lighted lamp at her medical attendant. This tendency to alcoholic excess was not entirely new, and earlier in the year she had tried to shoot herself in an outburst of excitement probably due to alcohol. In 1895 she put herself through the 'Keeley' treatment for drink habit, with apparently complete success, for she has been quite free from the craving from that date." In August, 1896, severe facial cramp set in, continued through 1897, becoming gradually replaced by uncontrollable retching, independent of the presence of food in the stomach, and worse at the menstrual periods, requiring increasing doses of morphine. In the autumn of this year regular menstruation ceased. From January 1st to October 6th, 1898, the average daily dose of morphine, as ascertained from the entries in a diary, was 12.6 gr.—the maximum 22 gr. and the minimum 6 gr.—injected.

I saw the patient for the first time on admission to hospital on October 7th, 1898, 12 gr. of morphine having been already injected that day. Between 4 and 8 p.m. 6 drachms of bromide were given. Ordinary diet ordered.

October 8th (second day). Slept all night; 6 gr. morphine injected in two doses; 9 drachms bromide given between 9.30 a.m. and 10 p.m.; awake all day.

October 9th (third day). A good night; 2 gr. morphine injected: 1 oz. of bromide between 9 a.m. and 10.30 p.m. From this date no drug of any kind was given except an aperient pill occasionally. Milk only ordered.

October 10th (fourth day). Slept all night through an alarm of fire causing disturbance in the hospital. Stupid; speech thick; cannot stand without assistance. Asked for morphine at 10 a.m., but the request was immediately forgotten and never renewed.

From this date till October 15th (ninth day) she slept continuously except when roused for food or for evacuation of bladder or bowel, but even then could not be described as awake. She would put out the tongue at command, could not speak, or but a few words indistinctly, and was completely helpless. Regular sugges-

tions of evacuating the bladder and bowel were made by placing the patient on the commode. During this time she moved on three or four occasions as if to get out of bed, and with support under the arms would walk a few steps aimlessly.

October 15th (ninth day). Muttering indistinctly. She recognizes and names me.

October 16th (tenth day). Speech more distinct; scared; somewhat noisy in the evening; easily controlled.

October 17th (eleventh day). Slept all night; tongue, hitherto coated, now clean; wrist-drop, cannot hold a book, cannot read; speech distinct enough to reveal delusions.

October 19th (thirteenth day). Sitting in a chair; full of delusions; easily controlled; walking unsteadily; memory past and present dislocated; sleep irregular and sometimes delayed but good and sufficient; delusions continue, gradually becoming fewer until October 28th (twenty-second day), after which date they ceased.

On November 7th menstruation reappeared with an attack of migraine, tolerably severe, and preventing her from taking any food all day.

On November 10th she informed me that she had been longer without morphine than at any time since February, 1890.

December 2nd. Two other attacks of migraine and one of trigeminal neuralgia have passed without use of or desire for morphine. There has been a gain in weight, and the patient returns to Japan declaring herself better in health than for years, there being a very manifest improvement in her general appearance, and no inclination to retch or vomit with migraine.

December 9th. A letter from her husband reports her walking about the streets with her daughter for the first time in the latter's lifetime.

Case 5 seen in consultation with Dr. Milles, one of cocaine and morphine habit of several years' standing, in a highly nervous, excitable man, of whose sanity there was considerable doubt. I recommended proceedings similar to those adopted in Case 4, which produced after three days four or five days of continuous sleep, no drug of any kind being given after the third day. Sleep was followed by the stages described in the other cases, recovery of locomotion, speech, and memory being more rapid, no craving for morphine or cocaine being manifested, although its absence was noticed by the patient, contrasting markedly with his first day in the hospital, when his demands for morphine were urgent enough. Four weeks after leaving the hospital there had been no relapse.

Case 6. A medical man, aged 37, wrote to me on November 30th, 1898: "I first got addicted to the habit in 1889 after the Burmese war, during which I got an attack of dysentery, for which another surgeon gave me morphine injections, and kept it up till 1891, when I took leave home and placed myself in a home. In two months I had quite given up the habit, and kept from it till last May, when owing to trouble, worry, and depression I again

started. I nearly succeeded in recovering again in August, when I took a trip in a sailing ship, and was at sea forty days. My supply ran out in fifteen days, and I had none for the remaining twenty-five days, but I resumed it when I landed. During the first half of last month I daily took as much as 30 gr. of morphine with 15 to 20 gr. of cocaine. The last ten days I have come down to 5 gr. daily. . . . I came up here from Hong Kong. . . . I know if I continue as I am now doing that a few months will finish me, and I would submit to any means you could suggest. . . . One thing I cannot bear, the sudden and total deprivation, and I nearly committed suicide at Hong Kong because —— who I placed myself under tried that plan." Family and personal history other than that referred to in the above quotations good, with the appearance of an enfeebled, excitable man. He was admitted to hospital on December 1st, 1898, having himself injected 6¼ gr. of morphine on that day. Syringe and supplies given up. There being some diarrhea, milk only was ordered. The stools from this day were natural; 1 ounce of bromide was given in 2-drachm doses before bedtime.

December 2nd (second day). Slept all night a dreamless sleep; 2¼ gr. of morphine injected seemed to satisfy him. In discussing the risks of the treatment with him, I pointed out that I could not say it was free from risk, but that so far in the seven cases I had dealt with I had not had reason for anxiety, adding curiously enough that the intercurrence of, say, a pneumonia would be dangerous. Prepared for all risks, he drafted and executed a will that evening; 10 drachms of bromide taken before bedtime.

December 3rd (third day). Part of the night restless; ¾ gr. morphine given. Slept nearly the whole day; the eyes were observed to be flushed. After bedtime the nurse, not understanding that the bromide was then to be suspended, continued it in drachm doses through the night at intervals for restlessness.

December 4th (fourth day). Awake at morning visit and afraid he would not have enough morphine. Injected a grain and ordered the bromide to be stopped—36 drachms having been given. He slept quietly all day, but became restless at 10 p.m., remaining so till 2 a.m., when he slept.

December 5th (fifth day). Could be roused and took his milk. Coughing through the day and spitting over the bedclothes. Slept all day.

December 6th (sixth day). A quiet night till daylight, when there was very rapid breathing, embarrassed if lying on the back or right side, eased if lying on the left. 9 a.m. Temperature 102.8°; pulse 96, good; respirations 88, shallow and regular. As examined lying on the left side, no dulness, but numerous moist sounds audible behind. Noon. Temperature 105.2°, pulse 100, respirations 96; dulness at right base was made out at 3 p.m., and extended at 9 p.m. right up to the apex behind (lying on the left side).

December 7th (seventh day). Died at 8.45 a.m.

Post-mortem examination revealed consolidation of right lower lobe, the tissue sinking in water; a similar though less advanced condition at the left base; 15 to 16 ounces of bloody fluid in the right pleural cavity, and a few ounces of similar fluid in the left; numerous old, more or less stretched, adhesions over the anterior, lateral, and basal surfaces of both lungs.

In this case more bromide was given than necessary, I think, during the third night, the nurse not understanding that the bromide was not to be given after bedtime. The recent journey from the warm South into our cold weather, the enfeebled health consequent on the habits, and the bromide may have acted as predisposing causes to the acute lung ailment. The respiratory centres showed no sign of depression from the bromide, their response to the pneumonic poison producing respiratory movements as rapid as one sees in infants. Its action in repressing cough was manifest, and probably when the flushing and restlessness at night were present, had there been no bromide, the cough would have attracted attention. Had he not had bromide, he would have had morphine, which cannot be said to be without danger in pneumonia.

The results in these cases, though few, were so marked and constant that they seem to me to promise fulfilment of the following claims for the method of treatment: (1) The withdrawal within three days of even large doses of the drug causing the habit; (2) the certainty that this will cause no suffering; (3) the patient cannot deceive those dealing with him in the matter of secret administration, nor can he enlist after the third day the aid of attendants; (4) any physician with the aid of vigilant nurses can deal with the case in any hospital or private house, no special institution is needed; (5) there is no risk of substituting another drug habit, and the craving will be lost whether the patient desires it or not.

Whilst nothing has been observed in these cases, which pointed to disturbance of vascular, respiratory, or alimentary systems to a degree causing anxiety, they are too few to determine that the treatment is without risk. Intercurrent maladies in the course of treatment may be dangerous, but here we have to choose between the apparently temporary risk of the bromide, and that from the more prolonged use of the morphine or other drug. With regard to ultimate recovery of locomotion, memory, etc., so far, each case has been quite satisfactory in that respect, with the one exception of a blank representing the period under bromide. When memory before treatment, as in Case 4, has been defective, and also the power of concentration of attention and prolongation of that effort, these have markedly improved. As a psychological experiment, the rapid retrogressive changes in the functions during the first few days, the vegetative intermediate state and the slow evolutionary progression of recovery are full of interest.

The treatment is directed against the morphine or other habit, in which the craving for the drug is so strongly reinforced by the slightest demand for the relief of pain, sleeplessness, etc., that it

appears impossible to resist it. The treatment removes this craving, and if the disorder is functional, the bromide rest, the changed dietary, the cutting off of all ordinary surroundings more completely than is possible by other means, may not be without beneficial effect on the pain, etc. For those in whom other treatment has failed, and for all who are willing to submit to this method, it offers what appears to be a certainty of deliverance from the craving without suffering, which is more than can be said of any other method of treatment of which I am aware. By the time the patient has become capable of making the drug which has caused the habit the object of thought, it has actually become disassociated from his comfort, and the new relationship a matter for astonishment.

That this use of the bromide may prove beneficial in other maladies is suggested by two other cases. One of these, a lady forty-eight years old, suffered from an attack of acute mania occurring in a Japanese hotel in the interior of Japan, where the sounds from the other inmates drove the patient frantic. Without forcible restraint, a two days' journey by hammock and boat would have been impossible. In the bromide sleep all irritation from light and sound ceased, but, as no assistance could be had in nursing the patient through such an illness on the spot, in this sleep she was carried twenty miles in a hammock swung on two chair poles, lay asleep on the deck of a small steamer for several hours, spent a night in another Japanese hotel, was put on board a steamer, carried 500 miles, and placed in her own bed in her own house, where she awoke two or three days later none the worse for the journey. She passed through stages similar to those already described, and, when the effect of the bromide passed off, there was not a trace of mental disturbance, and she is still well over a year later. The part played by the bromide in securing sleep and rest amid such surroundings, and the aid to transportation were sufficient in my opinion to justify its use. How far its effects had to do with the rapid recovery from the acute mental ailment is difficult to estimate. The profound bromide sleep was a great contrast to the excitement of mania, and secured a prolonged condition of complete mental rest where it was much needed. The circumstances under which the illness broke out demanded stringent measures.

The second case was one of uncontrollable vomiting, a feature in neurasthenia, the subject of which was a lady doctor, sent to me by her brother, also a doctor, from the interior of China. As the vomiting seemed to me to be of undoubted nervous origin I suggested a trial of the bromide. Given by the rectum it caused such irritation that it could not be retained, irritation not confined to bromide, as was found later. Given by the mouth it took longer to produce its effects because of its frequent rejection. The stomach, however, seemed more tolerant of the drug than of other things, and after five or six days sleep set in, but not so profound as in the

other cases described, with cessation of the vomiting habit. When recovery from the bromide was taking place the vomiting again manifested itself but much less than before treatment, and to an extent not causing any anxiety. I regretted not having pushed the drug effect to a greater degree, but not being certain of the amount retained, and as its effect appeared greatest sometimes two or three days after the last dose, I was afraid to continue it in this case. She is now, three months later and after a trip to Japan, apparently quite well.

It is noteworthy that the loss of alcoholic craving in the second case was pointed out by the astonished patient himself. It may not be out of place here to add a sketch of the method of treatment, with some reference to the immediate results of the drug. Having taken the weight of the patient and ascertained that there is nothing to contra-indicate this treatment in the way of organic disease, the sodium bromide may be given in two doses of 2 drachms, in solution every two hours for the first two days, and 1 drachm during the third day. None is given after bedtime on the third day. Three ounces of the drug in all will probably suffice, but more may be given to induce deep sleep that may continue for five or six days and nights, during which time milk alone should be given. Every night and morning during this time, the patient should be placed on the commode for bladder and bowel evacuation, or oftener if there be any sign of soiling the bed linen. For a week or ten days after this sleep, the speech, which is at first indistinct, locomotion, which is of the feeblest or impossible, and the great confusion of ideas will all be seen gradually to improve, the mental condition, however, most slowly. Delusions, at first numerous, will lessen; memory will improve; sleep may then be irregular, but further treatment is undesirable. Solid food should be given as soon as it can be taken, and the bowels regulated, and after locomotion is recovered it is well to encourage the taking of exercise. The muscles may be observed to become tender, but this will pass off. Morphine may be given the first day in the habitual dose, halved the second, and none or but a small dose the third. Chloral may be cut off at once if there is a good sleep the first night. Cocaine may be dealt with like morphine. A case may appear well in three weeks, but at least other three weeks, and if possible longer, should be insisted on, as if for convalescence after a severe illness. An even, warm temperature of the room should be maintained. Warm night clothing for protection on getting out of bed or throwing off the blankets should be provided, and a nurse should be on duty day and night for at least the first three weeks. —*British Medical Journal.*

J. J. C.

Proceedings of Societies.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

THE American Association of Obstetricians and Gynecologists will hold its twelfth annual meeting in the Assembly room of the Denison House, Indianapolis, Ind., Tuesday, Wednesday and Thursday, September 19th, 20th and 21st, 1899.

The management of the Denison House (which should be addressed on the subject) offers the special rate of $3.00 without bath and $3.50 with bath, a day, American plan, to members and guests of the Association who attend the meeting. The Denison House will also provide an excellent room for the meeting.

OUTLINE PROGRAMME.

The Association will meet in executive session with closed doors on Tuesday, September 19th, at 9.30 a.m., for the election of new Fellows. The open session for the reading of papers will begin at 10 o'clock. Recess for luncheon at 1 o'clock p.m. Afternoon session at 3 o'clock; recess at 5.30 o'clock; evening session at 7.30 o'clock.

The morning session will begin Wednesday at 10 o'clock for the reading of scientific papers. Recess at 1 o'clock. Afternoon session at 3 o'clock. Adjournment at 6 o'clock.

At 6.30 p.m., Wednesday, the executive session will convene for the election of officers, and for such other business as may come before it under the rules.

The morning session will begin Thursday at 9.30 o'clock to continue until 1 o'clock p.m., when recess will be taken for luncheon. The afternoon session will be called at 3 o'clock and at 5 o'clock the closing ceremonies will be held. A full attendance is especially requested at the final session.

At 7.30 o'clock p.m., Wednesday, immediately after the executive session, the annual dinner will be served at the Denison House.

The cost for each cover will be $2.50, exclusive of wines. It is highly probable that former President Harrison and Senator Beveridge will make addresses at the dinner.

It is particularly desirable that every member who contemplates attending the dinner shall notify the chairman of the Dinner Committee (postal cards, addressed to the Secretary, are enclosed for

the purpose) as far in advance as possible, and likewise designate how many seats he wishes reserved.

The hours named in the foregoing schedule are subject to change by vote of the Association or Executive Council.

THE EXECUTIVE HEALTH OFFICERS' ASSOCIATION.

THE Committee of the Executive Health Officers' Association of Ontario has decided to accept the invitation of the city of London to hold it annual meeting in that city. The meeting will take place on Wednesday and Thursday, September 14th and 15th, 1899.

Dr. Hutchinson, the able Health Officer of London, is Vice-President of the Association, and as chairman of the local Committee of Arrangements will do all in his power to make the meeting a success. It is expected, also, that there will be several guests from the United States present to give papers and take part in the discussions.

It has been thought desirable to limit the discussion to certain topics. The following have been selected as more important, and all are requested to notify the Secretary of their willingness to either prepare a short paper or discuss specially any one or more of the following subjects:

1. The duty of rural health officers and health boards in dealing with pulmonary tuberculosis.
2. The duty of city and town health officers and health boards in dealing with pulmonary tuberculosis.
3. Tuberculosis in cattle and its bearing on the health of the public.
4. Needs and methods for the ventilation of schools.
5. Street pavements and their relation to the public health.
6. Rural water supplies in their sanitary relatives.
7. The sanitary aspect of the construction of farm dwellings.

As the meeting is to be held during the week of the Western Fair it will not be necessary for members to obtain the usual railway certificates, as they may avail themselves of the rates in force at that time. The Committee hopes that all will make it a point to be present at this meeting, and bring with them any members of their local Board of Health who can come, as it wishes to make this a record meeting in point of numbers and interest.

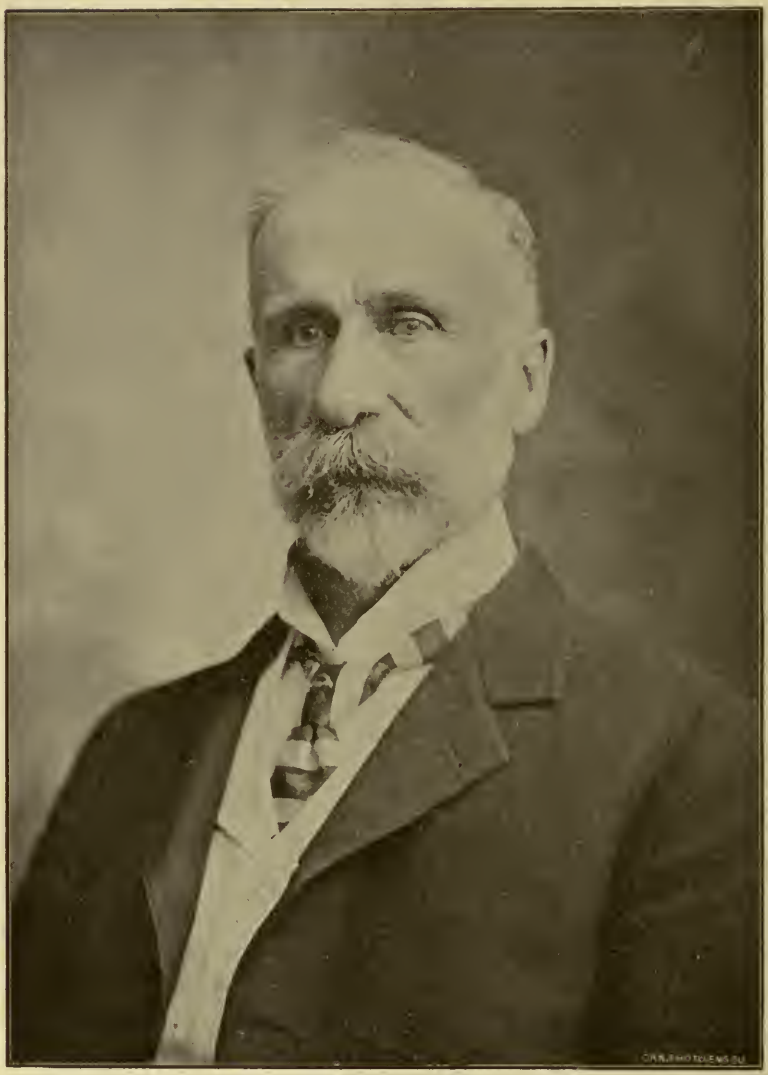
All are requested to notify the Secretary at their earliest convenience of their intention to be present and of the subject they will deal with.

DR ALEX. MCPHEDRAN is building a very handsome residence on Bloor Street West, almost opposite Avenue Road on the south side. The excavations are well under way already and the doctor expects to be in possession by the 1st of March next.



THE LATE MR. LAWSON TAIT.

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DR. W. F. ROOME

PRESIDENT ONTARIO MEDICAL COUNCIL.

The Canadian Journal of Medicine and Surgery

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Medical Jurisprudence and Toxicology—N. A. POWELL, M.D., Toronto, and W. A. YOUNG, M.D., L.R.C.P. Lond., Toronto.

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Pharmacology and Therapeutics—A. J. HARRINGTON, M.D., M.R.C.S. Eng., Toronto.

Physiology—A. B. EADIE, M.D., Toronto, Professor of Physiology Woman's Medical College, Toronto.

Pediatrics—AUGUSTA STOWE GULLEN, M.D., Toronto, Professor of Diseases of Children Woman's Medical College, Toronto.

Pathology—W. H. PEPLER, M.D., C.M., Trinity University; Pathologist Hospital for Sick Children, Toronto; Demonstrator of Pathology Trinity Medical College; Physician to Outdoor Department Toronto General Hospital; Surgeon Canadian Pacific R.R., Toronto; and J. J. MACKENZIE, B.A., M.B., Bacteriologist to Ontario Provincial Board of Health.

Laryngology and Rhinology—J. D. THORBURN, M.D., Toronto, Laryngologist and Rhinologist Toronto General Hospital.

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Address all Communications, Correspondence, Books, Matter Regarding Advertising, and make all Cheques, Drafts and Post-office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College St., Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

VOL. VI. TORONTO, SEPTEMBER, 1899. NO. 3.

Editorials.

THE PROPHYLAXIS OF RAILWAY CARRIAGES AND DEPOTS.

HEALTH authorities in Canada, nowadays, would not permit a patient known to be affected with small-pox, scarlet fever, diphtheria, or cholera to travel by day-coach or sleeping car and if, by mischance, such a case were to occur, the cleansing and disinfection of the carriage would be expected to follow as a matter of routine.

Consumptive persons, however, occupy seats and berths without hindrance. This error is probably due to a survival in the popular mind of the now antiquated opinion, that phthisis is a purely constitutional disease and not contagious. Modern physicians, however, entertain a totally different opinion. Phthisical invalids are constantly travelling, and the railway companies should provide for their use compartments or carriages, so constructed that isolation could be practised in the first place, while cleaning and disinfection could be rapidly and economically accomplished after arrival.

The construction of the Canadian railway carriage, which is open from end to end, not only does not lend itself to such methods, but really makes them difficult and expensive. In the first place, a carriage filled with passengers and containing about sixty cubic feet *per capita* of air space, offers no barrier to the contagious sputa of a consumptive, who coughs quite freely in close proximity to his fellow-travellers and expectorates on the floor. Secondly, the thorough disinfection of such a carriage, in which one or two consumptive patients have travelled, takes a longer time and requires more material and labor than the disinfection of one or two compartments of a carriage. A compartment, such as is seen in a European railway carriage could, after occupation by a case of consumption, be disinfected in a rapid and economical manner. In order to secure the adoption of such a precaution by travelling consumptive persons, it would be necessary to pass a law such as has been recently suggested in France by Dr. Vallin, forbidding, under a penalty, any person affected with a dangerous or contagious disease to travel in an ordinary railway carriage. Such a person would have to travel in a special compartment, which he would occupy alone or accompanied by persons charged with looking after him. On arrival at his destination, his compartment should be immediately designated by a ticket bearing the words "For disinfection" and should be rigorously disinfected. The placing of a ticket, bearing the words "Disinfected," would show that the carriage might be returned to the service. Movable spittoons, containing a solution of bichloride of mercury 1-1000, should also be provided in all day-carriages and in sleeping cars. Linoleum or some similar substance should be used as a covering on the floors of carriages, instead of cocoa matting and wool carpets, and as a matter of routine, all railway carriages should be mopped and rubbed with a damp cloth after each trip. In cleaning floors, dry sweeping should be used only as a preliminary to subsequent washing. If

the wooden floors of carriages are not covered with linoleum, they ought to be painted with oi land then, if thoroughly flushed and mopped each morning, can be kept in a satisfactory condition.

Notices should also be placed in carriages, informing the public that "In order to prevent the propagation of contagious diseases and particularly, tuberculosis, passengers are expressly forbidden to expectorate on the floor of a carriage."

A similar notice should be hung up in waiting-rooms and at the entrances of railway stations. Stationary spittoons, fixed on a metal stem, about a yard above the floor, should be placed in the waiting-rooms and at the entrances of railway depots.

Wherever wooden floors in railway stations cannot be replaced by asphalt, they should be made impermeable by means of a mixture of coal tar and heavy oil of pit coal and they should be cleaned with the mop at frequent intervals. J. J. C.

LAXATIVE BREADS.

NOWADAYS, the wheat used in making white bread is rolled between metal cylinders, so that the hull is removed and little but the starchy interior and a certain proportion of gluten remains. It has been found by experience, that the use of bread made from such flour renders the bowels constipated, so that, when people wish to get the bowels to act fairly and regularly, they give up the use of fine white bread and take whole wheat bread or common brown bread. The latter, which is sometimes made from white flour, to which bran and treacle are added, owes its laxative effect to these agents. The bran, being quite indigestible, exercises a slightly mechanical stimulation upon the mucous membrane of the intestinal canal, as it passes down; the salts contained in the bran help to excite the secretions of the intestine; the treacle also excites secretion, and possibly exercises a stimulating effect on the muscular fibre of the bowels.

Brown bread of this class contains the same amount of gluten and starch as the white flour from which it is made and is not more nutritious than ordinary white bread.

Whole wheat bread is sufficient to keep the bowels moving in persons, who would otherwise suffer from constipation. In milling wheat to make this kind of flour, after the outer layer of the hull has been removed in the cleaning process, all the contents of the

grain, gluten, starch, the neutral salts of the inner hull, and the wheat germs are rolled together. So that, for nutritive purposes, whole wheat flour is superior to white flour, from which the bran as well as a considerable percentage of gluten have been removed. Now, whole wheat flour is laxative in its effects; but the unsifted bran, present in the flour, does not altogether account for this characteristic. Whole wheat bread contains a special oil, the oil of wheat, which is originally present in the germ or embryo of the grain. This oil is caustic in its local action, even causing ulcers when applied to the skin. For internal use it cannot be given, except in capsules. When swallowed it causes violent colic and exerts a purgative action, as drastic as croton oil. Dr. Bovet, of Paris, who has studied the properties of the oil of wheat, thinks that the laxative effect of whole wheat bread is due to the oil of wheat which it contains, rather than to the bran.

On the other hand, Dr. Camescasse contends, that the flour manufactured from cylinders, according to the modern process, does not contain the germs of the wheat and, consequently, bread made from it would not exert any effort on the peristaltic action of the intestines.

It is quite likely, that, if people ground their wheat in a hand-mill and then baked their bread of this coarse flour, every germ of wheat would be preserved and bread, made from such whole wheat, would tend to keep the bowels of those taking it regularly active. It was, no doubt, a medicinal bread of this kind, which was found so useful by Dr. Camescasse, in treating the constipation of wet-nurses in Paris. We have seen and examined specimens of unsifted wheat-flour, manufactured from cylinders in Toronto and we have seen the germs of the wheat present in the flour. It would not, therefore, be correct to say, with Dr. Camescasse, that the wheat germs are all removed by the cylinder process of milling whole wheat flour. Some of the germs, say one-half of one per cent., may disappear with the outer shell of the grain, in the preliminary process of cleaning. In milling whole wheat flour in Toronto, after a thorough cleaning process, the grain is made to pass through a succession of cylinders, until reduced to the required size; but is not subsequently sifted and, therefore, both the bran and the wheat germs are retained. Bread made from this kind of flour, is pleasant to the taste and more nutritive than fine white bread. It relieves constipation by the action of the bran and also by the oil of wheat, both of which are retained in the flour from which this bread is baked.

J. J. C.

THE GRAVENHURST SANATORIUM FOR CONSUMPTIVES.

It seems but yesterday since invitations were extended by the members of the Muskoka Cottage Sanatorium Association to be present at the opening ceremonies of the Gravenhurst Sanatorium for Consumptives. Yet two milestones in its history have been turned, and the public interest in its success has been very practically manifested. The institution is of a national character. By that we mean Canadian, and consequently it was with great pleasure that we noticed in Dr. S. A. Knopf's recent book on pul-



ADMINISTRATION BUILDING, MUSKOKA COTTAGE SANATORIUM.
Erected through the gifts of late Hart A. Massey and W. J. Gage.

monary tuberculosis that a chapter was devoted to illustrations and descriptions of over forty of the prominent sanatoria for the treatment of tuberculosis all over Europe, the United States and Canada. The latter was very creditably represented by half-tones of the Gravenhurst main building and several cottages; but, while the author's proof-sheets have been drying, the wizard of practical sympathy has again waved his wand, and a group of cottages vying with each other as to utility and construction of artistic



THE WM. DAVIES COTTAGE, MUSKOKA COTTAGE SANATORIUM FOR CONSUMPTIVES.



SUN ROOM, MUSKOKA COTTAGE SANATORIUM.

design, have been added, and on Saturday, the 21st of July, they were formally presented to the Association.

A large number of prominent citizens and physicians from Toronto responded to the invitation and spent an unusually interesting day. The donors of the cottages were:

Mrs. Bull, of Toronto. In memory of her only son, B. Frank Bull, who died in 1895. "Rosemary" cottage, was the gift of Mrs. Jackson Sanford, of Hamilton, Ont., in memory of her husband, who died in 1898. This cottage is beautifully furnished and ready



INTERIOR VIEW OF B. FRANK BULL COTTAGE.

for occupation. Another was donated by Mrs. Mavor, since deceased, in memory of her husband. Mr. William Christie, of Toronto, has indeed given bountifully, his contribution being a cottage and $5,000 in cash. Still another cottage was presented to the Association by Mr. and Mrs. William Davies, of Toronto.

Perhaps to the man or woman strong and fully equipped for the "day's work" there comes a feeling of sadness when alighting at the Sanatorium wharf, as they think of those who are congregated in the beautiful buildings, but the scene is so full of life and

the patients so pleased with their surroundings and eager to tell of those who have been benefited by their sojourn, and how much they are gaining in weight and strength, that for the moment all sadness is cast aside.

In this haven, where so many are being nurtured back to health, the grim Reaper has recently found a trysting-place, and some have there fallen asleep expressing their gratefulness for the quiet and restfulness that pervaded their last days upon earth, far from the endless noise and throb of the city, and near to the heart of the universal mother—nature.

Canadians as a people are under a deep sense of obligation to those who have given so generously of their means for the alleviation of suffering humanity in this country, and also to the physicians and members of the Sanatorium Association who are giving so much time and thought to the management of this particular branch of crusade work against the dread malady.

Surely the intelligence should be heralded far and near, that the Gravenhurst Cottage Sanatorium is a Canadian institution and is intended for those (in the earlier stages of tuberculosis) unfortunate enough to need its shelter and treatment, all over the Dominion, "irrespective of creed or race." W. A. Y.

AUTOPSIES OF EXECUTED CRIMINALS.

At page 206 of this issue is a letter from Dr. R. R. Wallace and following it are some notes of the autopsy, made on the body of the matricide, Parrott, who was executed at Hamilton last June. We wish to thank Dr. Wallace and Dr. Balfe for their courtesy in sending us the notes of the post-mortem examination, which contain many interesting data. As our correspondent states, "No official autopsy was made; but, after the formal inquest was concluded, the coroner handed the body over to the jail surgeon to examine, if he wished."

We think that an autopsy should be performed on the remains of the criminal after every execution in Canada and that a pathologist of recognized ability should be deputed to perform this task. A report, containing the history of the criminal, together with a complete anthropological and anatomo-pathological study of the cadaver, should be prepared. Such reports, published in the medical and scientific journals, would increase our knowledge of the

relations existing between corporeal conditions and criminal tendencies, and would be of great interest to physiologists, alienists, medical jurists and educationists.

It is within the power of a coroner, who presides at the formal inquest held after an execution, to hand over the criminal's body for examination; but an autopsy, such as is here indicated, is not contemplated, and would not be performed, unless special provision were made for it. As legislation would be required to authorize such a procedure, it might be necessary to petition the Minister of Justice to introduce a bill for that purpose, or a resolution in favor of it might be discussed and, if approved of, adopted by the Canadian Medical Association. This bill should contain, among other provisions, a code of rules for conducting the autopsy, so that it would be performed under conditions, conformable to the present advanced degree of medical knowledge.

As society does not seem to derive any protective benefit from an infliction of the death penalty on a criminal, medical science ought, at least, to be permitted to reap some profit from a scientific examination and subsequent study of his mortal remains.

J. J. C.

EDITORIAL NOTES.

Cure of Jacksonian Epilepsy.—Dr. Von Bergmann exhibited at a meeting of the Berlin Medical Society, June 14th, 1899, a man twenty-six years of age, who had been cured of Jacksonian epilepsy by trephining. This man had in June, 1896, discharged two shots from a revolver into his head. When brought to the hospital blood was flowing freely from his wounds. Some few days afterwards, an abscess appeared in the right temporal region, which was opened, but healed slowly. About the end of June, the patient had convulsions, which began at the left labial commissure and affected the members on the left side. These convulsions, which were always accompanied with unconsciousness, returned frequently and then ceased to appear until the month of March, 1897. At that time, in spite of the complete cicatrization of the wound, the convulsions returned and became very frequent, and the patient complained of severe headache. An intra-cerebral abscess was suspected, and trephining confirmed this diagnosis. The improvement which followed this intervention was of short duration and, in July of the same year, trephining was done twice and on each occa-

sion a small quantity of pus was evacuated. These new operations, which resulted in the formation of a fistula, produced no amelioration. Dr. Von Bergmann saw the patient in July, 1898. He opened the skull and removed a sequestrum and this operation secured the disappearance of the convulsions. The X-rays, which were used recently in examining this patient's brain, revealed the presence of two bullets, one situated in the maxillary sinus and the other at the base of the skull. Their presence, however, did not excite the epileptic convulsions, which have ceased to appear, since the sequestrum has been removed.—*La Presse Médicale.*

Typhoid Fever Conveyed by Impure Water.—At a meeting of the Medical Society of the Hospitals (Paris), which took place on July 7th, 1899, Dr. Antony mentioned the following circumstance: Two regiments, garrisoned at Besancon, used the same water supply, which was contaminated. In March, 1895, one of these regiments, an artillery regiment, was attacked with typhoid fever during the prevalence of an epidemic of that disease. The other regiment, an infantry regiment, had no cases of typhoid fever. This fact, which appeared incredible, was explained in the following manner: An epidemic of la grippe having prevailed some time previous, as a precautionary measure, tea had been served out as the only drink to the infantrymen and, during the typhoid epidemic, the same practice was continued. This is the reason why the infantry regiment did not have a single case of typhoid fever. The history of these two regiments, in one of which the men drank unboiled water and caught typhoid fever, while in the other the men used boiled water from the same source and did not catch typhoid, has all the value of a real experiment. Commenting on this case, Dr. Widal remarked, that physicians were aware of the hurtful properties of impure water, but the people of Paris were not so well informed. No person in Paris should drink water, which had not been boiled or passed through a Pasteur filter.—*La Presse Médicale.*

Effects of Alcohol on the Body.—Experiments recently made by Professor W. O. Atwater, of Wesleyan University, show that alcohol is consumed in the body, evolving heat and energy and preventing waste. His experiments were carried out upon a man, placed in a respiration calorimeter. Pure alcohol was administered with water or coffee. The alcohol was taken with an ordinary diet of meat, bread, butter, milk, sugar, and

the like. The amount *per diem* was equal to about two and a half ounces of absolute alcohol, about as much as would be contained in five or six ounces or three average glasses of whiskey. Three important results were observed: First, the alcohol was oxidised, *i.e.*, burned as completely as bread, meat or any other food. Second, in this process all the potential energy of the alcohol was transformed into heat and muscular power. In other words, the body made the same use of the energy of the alcohol as that of sugar, starch, and other ordinary food materials. Third, the alcohol protected the material of the body from consumption, just as effectively as the corresponding amounts of sugar and starch. That is to say, whether the body was at rest or at work, it held its own, just as well with the one as with the other.—*The Sanitarian*

Influence of Confinement to Bed on Body Weight.—Drs. Toulouse and Marchand report on the influence of confinement to bed on the body weight of lunatics, who were treated in bed. Speaking generally, it may be said, that this method of treatment increases the emaciation of patients, tending towards a cachexia, for instance, paretics and stops the fattening of those who have a tendency to increase in weight, such as convalescents. Getting out of bed exercises contrary effects; that is to say, it favors a tendency to fattening, and diminishes a tendency to loss of weight.—*La Presse Médicale.*

A New Canadian Medical Journal.—*La Dosimetrie au Canada*, a monthly review of medicine and therapeutics, is published at Montreal in the French language, under the editorial management of Dr. J. L. Lemieux, with the collaboration of Dr. A. D. Aubry, Dr. E. M. Desaulniers, Dr. J. H. Brossard, Dr. A. O. Gervais, and under the business management of Mr. E. Lefort. As its name implies, this journal is intended to popularize the dosimetric system. We congratulate the editors on the neat appearance of the new journal and wish them every success.

Gargling.—M. Saenger, of Magdeburg, reports a number of tests and experiments with staining fluids, powders, etc., which have established the fact that only in very rare and exceptional cases does gargling bring the fluid in contact with all the surfaces desired. It does not reach the tonsils nor the back of the pharynx. It is also directly injurious, as it forces the diseased parts to excessive activity.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

HAMILTON, *July 3rd, 1899.*

Dr. J. J. Cassidy, Bloor Street, Toronto.

DEAR DOCTOR, Yours of the 27th ult. came duly to hand. I must apologize for a little delay in answering, but this was partly due to pressure of professional work during the past few days and partly to the necessity of seeing Dr. Balfe, the jail surgeon, in order to have his permission to send you such notes as I herewith enclose.

I wish to state that no official autopsy was made, but after the formal inquest was concluded the coroner handed the body over to the jail surgeon to examine, if he wished. The latter asked my assistance. So we two made the P. M. These notes I made out last evening from memory, and read them over to Dr. Balfe to-day. He approved of them, and I herewith copy them out for you. I regret that, for record purposes, a fuller report is not available, but as nothing of the sort was contemplated at the time, we simply satisfied ourselves of the gross appearances. If you desire any further information, and I can supply it, I shall be pleased to do so.

I am, yours sincerely,

ROB. R. WALLACE.

NOTES OF AUTOPSY.

Ben. Parrott was hanged at Hamilton, June 23rd, 1899, for the murder of his mother early in the preceding February. The execution took place in the jail-yard about 7.45 o'clock on the morning of the 23rd.

Parrott weighed about 160 pounds, was about 5 feet 8 inches in height, and had a drop of 9½ feet. The larynx and upper part of the trachea were completely crushed (the knot was placed below and slightly in front of the left ear, but with the drop came forward almost exactly under the chin). On taking firmly hold of the head with both hands great mobility could be detected between

it and the vertebral column; it could be moved laterally in either direction, or forward and back for almost the diameter of the vertebræ themselves, and the tips of one's fingers could be thrust into the space.

The scalp on incision was found to be abnormally thick; the calvaria was also rather thicker than the average, and was slightly asymmetrical in the occipital region. No unusual difficulty was met in separating it from the dura mater. The latter presented nothing worthy of note save that the Pacchionian bodies were very numerous and very adherent. The pia mater over the parietal regions presented a very noticeable milky appearance. In removing the brain from its situation, as the posterior part of the base was carefully raised the pons varolii, the medulla oblongata, and adjacent parts were seen to be of a deep red color—the site of a quite extensive extravasation of blood. Great care was here taken, as it was desirous to find out just exactly what gross damage was done the cord by the evident (externally) great injury to the vertebral column. It was soon seen that the spinal cord was completely torn through about two inches below the lower margin of the pons, and was connected with the lower portion only by the pia mater. After the removal of the brain, and thrusting the finger through the foramen magnum, the atlas was found in its proper position in contact with the occipital condyles, while the axis was with the lower part of the column, and the odontoid process intact upon it. Still with the finger in the foramen the complete circumference of the axis could be traced, and no fracture of bone could be detected. The weight of the brain was exactly 50 ounces. The convolutions seemed to be rather broader than the average. Right half of the brain, sliced horizontally, presented perfectly healthy brain tissue, as also did the left half, cut vertically successively through frontal, parietal and occipital regions. The cerebellum, on slicing, appeared quite normal. The pupils were equal and about midway between extreme dilatation and extreme contraction.

The Physician's Library.

BOOK REVIEWS.

Twentieth Century Practice. An International Encyclopedia of modern medical science, by leading authorities of Europe and America. Edited by THOS. L. STEDMAN, M.D., New York City. In twenty volumes. Vols. IV., V., VI., VII., and VIII. New York: Wm. Wood & Co. 1896.

Vol. V. of this great series is devoted entirely to diseases of the skin. Among the contributors to this department appear the names of such men as Chas. W. Allen, of New York; L. Brocq, of Paris; Radcliffe Crocker, of London, Eng.; J. N. Hyde, of Chicago; M. Kaposi, of Vienna; H. Leloir, of Lille, France, and last, but not least, our old friend, Douglas Montgomery, now of San Francisco. The book is divided into several different sections. That on "The Anatomy of the Skin and its Appendages" is written by Chas. W. Allen, of New York. A section is devoted to "Parasitic Diseases," and is written by L. Duncan Bulkeley, of New York. "Erythematous Affections" is from the pen of H. H. Whitehouse, of New York. Dr. J. N. Hyde writes the chapter on "Eczema and Dermatitis"; Radcliffe Crocker, the one on "Squamous Affections"; Dr. Brocq, of Paris, on "Papular Affections," and Henry Whitehouse, of New York, the one on "Bullous Affections." The book has also several other sections, all dealing with different diseases of the skin and by several men of note.

The section devoted to eczema is presented by Dr. Hyde in a very clear manner and makes thoroughly instructive reading. He has taken up his subject in a way which does not make the story tiresome, but on the other hand, attractive. After going into the etiology and pathology, he discusses the symptoms of the disease and points out that there are four elementary types of eczema: erythematous, papular, vesicular and pustular. He says that the erythematous is best recognized on the face of elderly persons of both sexes. It is, however, seen in other regions of the body and in children as well as adults. It is characterized by the production of a diffuse infiltrated patch of a dull and a dusky red hue. There is no moisture or discharge, little, if any, scaling until the disease has passed its apogee, and scarcely any crusting. The itching is uncommonly severe, though not as bad as in the papular form of the disease. This form of eczema most frequently occurs either on the lower portion of the brow or near the root of the nose, and may frequently be confounded with erysipelas. Eczema papulosum is one of the most common and most annoying of all forms of the disease. It occurs chiefly on the extensor aspect of the limbs, back of the trunk and neck, and on the buttocks. Eczema vesiculosum occurs always where the skin is thinnest, and is a rarer form of the malady. It never becomes chronic. Eczema pustulosum was in the old treatises named impetigo, and is very commonly observed in a portion of a large patch of eczema which exhibits in other localities non-pustular symptoms.

The author also divides eczema into several other classes, squamosum, seborrheicum, rubrum, parasiticum, marginatum, neuroticum, diabeticorum, intertrigo, fissum, verrucosum, sclerosum, acute, chronic and infantile. The treatment of this disease the author divides up into hygienic, internal and external. After pointing out that laxatives and cathartics play a very important part in the treatment of many cases, owing to there being an element of both

constipation and dyspepsia in all such classes of patients, shows that such drugs as strychnine, phosphorus, the mineral acids and ergot have proved of the greatest value. He points out that Crocker employed counter-irritation over the vaso-motor centres with marked benefit, using such as mustard, dry heat and friction. Dr. Hyde lays great stress upon the fact that the methods adopted in the treatment of this disease by charlatans and quacks, the administration of "blood-purifying remedies," composed chiefly of iodide of potassium or the "purely vegetable" nostrums, not only fail of securing the end desired, but in the long-run work disaster to patients. Under the local treatment of acute eczema, the combination of camphor with the other materials used for dusting powders is to be recommended on account of the anti-pruritic effects of that drug, as follows:

℞ Pulv. amyli..... ℥i.
Pulv. zinci ox. ℥ii.
Camphor pulv. ℥ss.
Make an impalpable powder. Sig. For external use.

The Lassar paste is very commonly employed, and is to be recommended. Put up according to the following, the author has found particularly good:

℞ Zinci oxidi ℥ii.
Talc. ℥iii-iv.
Acid salicylic grs. v-x.
Vaselin..... ℥ss.
Make an impalpable paste. Sig. For external use.

The glycerine jellies and varnishes, as suggested by Pick, of Prague, may be medicated in any way so that any desired ingredient may be applied to the skin, as for example:

℞ Gelatin 15 parts.
Zinci ox. 10 "
Glycerine 50 "
Water 50 "
Mix by gradual heating. When used, melt and apply with a brush.

The section of Volume V., devoted to diseases of the hair and nails, is written by Dr. Douglas W. Montgomery, of San Francisco. Under this heading this gentleman has considered hypertrichosis, alopecia, cavities, fragilitas, crinium, piedra, lepothrix, Giovanni's disease, monilethrix, trichorrhexis nodosa, Hodara's disease and plica. In dealing with that all-too-common disease, known as alopecia, the writer says though arsenic is "cracked up" as being almost a specific, it can only act as such by taking the place of a good tonic, and he says that there is no reason to believe that this drug acts in alopecia the way it does in chorea and psoriasis. The author thinks that two minims of Fowler's solution, given after meals and well diluted, very often proves valuable. As to local application, acting on the theory that the disease is due to a widely distributed virus, with especial accumulation at the points where the symptoms manifest themselves, the author has himself adopted the following lotion with the best of results:

℞ Bichloride of mercury..... grs. iv.
Alcohol..... ℥ii.
Water q.s. ad. ℥iv.

To be rubbed into the entire scalp, face, and neck every day. After this another solution is used, which is composed of

Bichloride of mercury..... grs. iv.
Alcohol..... } āā ℥i.
Spts. turpentine }

To be rubbed into the bald patches and a little beyond every day.

Under "Disease of the Nails," Dr. Montgomery considers such conditions as congenital absence of the nails, traumatism of the nails, discoloration of the nails in argyria, onychauxis (hypertrophy of the nail), and winged nail. He also refers shortly to the affections of the nails in "diseases of the nervous system," *e.g.*, growth of the nails in paralysis, shedding of the nails in locomotor ataxia, affections of the nails in multiple neuritis, the nails in acromegaly, the nails in myxedema, the nails in syringo myelia, and lastly, in epilepsy.

Volume VI. is entirely devoted to diseases of the respiratory organs; Volume VII. to the respiratory organs and blood, and functional sexual disorders, and Volume VIII. to diseases of the digestive organs. The principal contributors to Volume VI. are Winslow Anderson, of San Francisco; F. H. Bosworth, of New York; Albert H. Buck, of New York; G. A. Gibson and Grainger Stewart, of Edinburgh, and Professor James, of London. Those contributing to Volume VII. are C. W. Allen, of New York; Jules Comby, of Paris; C. G. Cumston, of Boston; E. W. Cushing, of Boston; J. M. French, of Cincinnati; E. Fletcher Ingals, of Chicago; Alfred Stengel, of Philadelphia; H. B. Whitney, of Denver, and E. Main, of Paris.

Volume VIII. of the "Twentieth Century Practice" is particularly good. Over half of its contributors are foreigners, such as Johann Mikulicz, of Breslau; Hans Leo, of Bonn; Werner Kümmel, of Breslau; J. Ch. Huber, of Memmingen, Bavaria; and B. F. Curtis, of New York; Max Einhorn, of New York; R. H. Fitz, of Boston, and J. M. French, of Cincinnati. As already stated this volume deals entirely with diseases of the digestive system. It is subdivided into sections on diseases of the mouth, of the esophagus, of the pancreas, of the peritoneum, animal parasites and the diseases caused by them, and the treatment of the diseases caused by animal parasites. The section on "Diseases of the Stomach" is written by Max Einhorn, and is very complete, commencing first with the anatomy of the stomach, the physiology of digestion, diet, the various diseases of this organ, and concluding with the different neuroses, sensory, motor and secretory. Under "Diet," the author divides food into animal, vegetable and liquid. He classifies the following list of animal foods according to their digestibility:

	Fat per Cent.
Calf's sweetbread, calf's meat, codfish, pike, oysters...	0.4 to 1.
Beef, hare, spring chicken, pigeon, partridge.....	1 to 1.5.
Mutton, pork.....	5 to 7.
Goose, herring, salmon, eel	over 8.

The digestibility of food greatly depends upon the quality and preparation. Young animals have soft and tender meat, whereas the flesh of old ones is tough. The different portions of the body vary frequently in their digestibility. The time that has passed since the killing of the animal is also of importance. Fresh meat which is yet in its rigid state, is tough and therefore very indigestible. In the preparation of meat it is necessary to see that it is separated from all indigestible matter, fascia, tendon, and cartilages. By pounding the meat, the connective tissue surrounding the muscle fibres is torn. By chopping, scraping, or grinding the meat, its digestibility is increased. According to Penzoldt, the cooking of meat serves only to improve its taste, raw meat being more easily digested than broiled, fried or boiled. The application of heat also diminishes the danger of infection, as in that way microorganisms are destroyed. Eggs are specially rich in albumen and fat. Milk contains all the elements of a typical diet: 1. Albuminous substances in the form of casein and serum albumen. 2. Fats in cream. 3. Carbohydrates in the form of lactose and milk sugar. 4. Salts, chiefly calcium phosphate. 5. Water.

Vegetable foods all contain more or less carbohydrates, so essential to proper diet. Those rich in proteids are pears, beans, lentils. They form the chief source of the nitrogen of the food of vegetarians. Those foods rich in carbohydrates are,: 1. Cereals(bread made from ground grain, *e.g.*, wheat, maize,

barley, rice, and oats). 2. Vegetables, rice, potatoes, etc. 3. Green vegetables, cauliflower, asparagus, turnips, cabbage, and carrots. 4. Fruit, *e.g.*, pears, apples.

Under "Liquid Foods," the author claims that tea in moderation is a stimulant, containing an aromatic oil to which it owes its peculiar aroma, an astringent of the nature of tannin, and an alkaloid, theine. The composition of coffee is very similar to that of tea. Cocoa contains fats, albuminous matter, and starch, and must be looked upon more as a food. Beer contains 1 to 8 per cent. of alcohol. Wine, as made from grapes, contains from 6 or 7 (Rhine wine and red and white Bordeaux) to 24 per cent. (ports and sherries) of alcohol. Spirits obtained from the distillation of fermented liquors contain upwards of 40 to 70 per cent. of absolute alcohol. According to Rubner, the residue of the different food stuffs, that is, the indigestible matter, is smallest under a diet of animal food and highest under one consisting of vegetables. The author holds that the diet in health should not always comprise the most easily digested substances, for in this way the digestive system is weakened, and although it is not necessary to choose the substances which are hard to digest, it is certainly not necessary always to avoid them. The food should consist of mixed substances, and should always present a sufficient variety.

Curtis, who in Volume VIII., writes the section on diseases of the peritoneum, under "Appendicitis, and its Treatment," advises in mild cases the application of such as ice-bags, or a poultice if the latter is more agreeable to the patient. The ice-bag will relieve pain and lessen the hyperesthesia, while it does not obscure the symptoms in the same way as morphine, making it much easier to palpate the region when the parts have become thoroughly cooled by the ice-bags. If morphine is employed, it must be given in very small doses with the intention of modifying pain without removing it entirely, and of giving the patient courage to bear it. As to purgatives, it may be said, in a general way, that they are dangerous, even in the earliest stages. There is no doubt that the administration of purgatives tends to dissipate the inflammation, but the violent peristalsis which they set up is liable to rupture the adhesions and spread the infection, thus producing the condition which we are anxious to avoid. Calomel in moderate doses may be given, or small doses of the weaker salines. Strict rest must be enforced, and the diet as near starvation as possible, very small quantities of milk or beef tea only being allowed. If improvement is not then immediate, the question of operation must be discussed. Treves is in favor of delaying operation for five or six days, thus rendering the mortality lower; but as both Morton and McBurney hold, cases which die after five or six days have begun to die much earlier, and if we are to save them we must operate much earlier. The mortality of appendicitis is greatest just at the beginning of this period, including the period of sudden perforation cases. It is also high after the first week, when the secondary results of rupture of abscess or septicemia occur. Sormenburg claims that there is always pus from the moment of perforation. There is no question as to the advantage of waiting for a well encapsulated abscess to form if we were only certain that the encapsulation would take place. It is true that the adhesions during the first forty-eight hours are very slight and easily broken down, but there are no means of distinguishing between those cases in which strong fibrous adhesions will be formed and those in which adhesions will remain soft throughout, subjecting the patient to the constant danger of a spreading or a general peritonitis. W. A. Y.

Pulmonary Tuberculosis. Its Modern Prophylaxis, and the Treatment in Special Institutions and at Home. Alvarenga prize essay of the College of Physicians and Surgeons of Philadelphia, for the year 1898, revised and enlarged. By S. A. Knopf, M.D. (Paris and Bellevue, N.Y.), Physician to the Lung Department of the New York Throat and Lung Hospital; former Assistant Physician to Professor Dettweiler, Falkenstein Sanatorium, Germany; Vice-President of the Pennsylvania Society for the Prevention of

Tuberculosis: Fellow of the American Academy of Medicine; Laureate of the Academy of Medicine of Paris, etc. With descriptions and illustrations of the most important sanatoria of Europe, the United States and Canada. Octavo. Price, net, $3.00. Philadelphia, Pa.: P. Blakiston's Son & Co., 1012 Walnut Street.

It was after considerable pressure brought to bear upon the author of this work that he was induced to undertake to present to the profession something new in the prophylaxis and treatment of tuberculosis pulmonum. He was encouraged to do so by his friends after he had written his French thesis at the Faculty of Medicine of the University of Paris, "Les Sanatoria: Traitement et Prophylaxie de la Phthisie Pulmonaire." There is no question about it that, with the frightful inroads the "white plague" is making these days among mankind generally, and the awful development and increase in the death rate it is causing every day, it is safe to say that it is almost impossible that too much can be said or written on this branch of medicine. The author has commenced by giving in Article No. 1 some very interesting facts as to the history of tuberculosis, thereafter in several chapters going into the mortality from tuberculosis; proofs as to the curability; the communicability of tuberculosis, with the means to combat its propagation by individual prophylaxis; public prophylaxis in reference to the disease in man; and preventive treatment.

One of the most interesting parts of the book, however, is that devoted to the most important sanatoria and special hospitals for consumptives in Europe, Canada and the United States. This section is freely illustrated, most of the half-tones and line-cuts being exceedingly clear and distinct. In the European sanatoria, mention is made of Falkenstein Sanatorium, on the southern slope of the Taunus Mountains, no less than 1,300 feet above the level of the sea; Ruppertshain Sanatorium, near the village of that name in the Taunus Mountains; Brehmer Sanatorium, in Goerbersdorf; Dr. Roempler's Sanatorium, in the Giant Mountains; the sanatorium of Countess Pueckler, in Goerbersdorf; and others in Germany. The Tonsaasen Sanatorium, in Norway, is alluded to at some length. A chapter is devoted to the Royal Hospital for Consumption at Ventnor, in the Isle of Wight, and one to Brompton Hospital, in London. Under Canada, the Muskoka Cottage Sanatorium is given some space, with very fine half-tone plates of the main building and one of the cottages. These photographs were taken by Dr. N. A. Powell, of Toronto, and are exceedingly sharply defined. Under Canada, also, the Laurentian Sanatorium is devoted some space. This sanatorium, as our readers know, is near the village of Ste. Agathe des Monts, about 64 miles from Montreal. We are sorry that a better illustration of this institution is not given, as the line-cut does not do it justice. This section on Gravenhurst and the Laurentian sanatoria will, to a great many, be of additional interest. Amongst the hospitals for the treatment of this disease in the United States, and referred to in this book, are Glockner Sanitarium, at Colorado Springs, Col.; "The Home," at Denver, Col.; The Hygeia, at Citronelle, Ala.; Asheville Sanitarium; Free Home for Consumptives, at Boston; Sharon Sanitarium, near Boston; Rush Hospital for Consumptives; Pasteur Sanitarium, at Suffern; Loomis Sanitarium for Consumptives, at Liberty in Sullivan County, N.Y.; and Winyah Sanitarium, at Asheville. N.C. This latter institution was founded by Dr. J. W. Gleitsmann, of New York. It is under the direction of Dr. Karl von Ruck, who has made a name for himself through his efforts to stamp out this disease. The building consisted, when the book went to press, of a large building, with verandas, accommodating about one hundred patients. Recently plans have been decided upon for a much larger institution, to be situated in a grove of oaks and pines, twenty acres in extent. Winyah has a magnificently equipped laboratory for bacteriological research. The descriptions of the various institutions throughout the world are exceedingly interesting, and give a very clear account of what is being done for the treatment of this terrible disease. We heartily commend Dr. Knopf's work as being well worthy of purchase.

Medical Jurisprudence of Insanity, or Forensic Psychiatry. By S. V. Clevenger, M.D., Attending Physician Alexian Brothers' Hospital; Consulting Physician Michael Reese Hospital, Chicago; Associate Editor of *The Alienist and Neurologist*; formerly Medical Superintendent of the Illinois Eastern Hospital for the Insane; Pathologist of the County Insane Asylum, Chicago; Professor of Anatomy, Art Institute, Chicago; Lecturer on Physics, Chicago College of Pharmacy; Author of Comparative Physiology and Psychology, Spinal Discussion, etc. With an exhaustive presentation of the judicial decisions upon the subject, by F. H. Bowlby, Counsellor-at-Law of the Publishers' editorial staff. Two vols. Rochester, New York: The Lawyers' Co-operative Publishing Co. 1898.

It is a long time since a work on the medical jurisprudence of insanity has been written in the English language—well over half a century. It is, therefore, little wonder that Dr. Clevenger's work has so far received the reception it has from the medical profession as a class. The main reason, of course, is that this work is not only a general medical text-book on insanity, but, in addition, a medico-legal treatise, with a digest of the English and American law. Vol. I. is divided into eleven chapters, commencing with definitions and tests of insanity; the classification of various authors; symptoms from asylum observation, giving the conduct of patients, premeditation, design, superstitions concerning insanity, delusions, hallucinations, illusions, etc.; diagnoses; criminal cases; legal adjudications in criminal cases; civil cases; legal adjudications in civil cases; evidences of insanity; and, lastly, a chapter on witnesses and jurors. In the section on criminal cases the author, in referring to the legal criterion of responsibility, quotes from the Twenty-ninth Annual Report on Lunatic Asylums, Province of Ontario, 1896, giving the result of Dr. R. M. Bucke's examination of 1,034 patients in his institution at London, Ont. Dr. Bucke, after examining every patient resident in the asylum, found, out of 1,034, 763 able to realize and appreciate the nature and quality of an act of homicide and to understand that such was wicked; of the remaining 271, there were 121 able to express an opinion on the subject, but seemingly destitute of moral feeling, these disclaiming any sense of repulsion from such an act, as well as any feeling or knowledge of its wrongfulness. The other 150 could give no intelligible answers. The deductions made from the above, as also other, reports are most interesting in reference to the committing of acts of murder, the making of wills, etc., etc. In the chapter on civil cases, such subjects as political rights and the impropriety of permitting imbeciles to vote upon public questions are gone into. The subjects of impeachment, torts, defamation, false accusations, punitive damages, contracts, promissory notes, partnerships, patents, conveyances, ratification and life insurance, are considered separately. Chapter X. is devoted to Evidence of Insanity. This subject is divided into seven sections, the first dealing with the presumption and burden of proof; second, the measure of proof; third, the presumption of continuance; fourth, competency and admissibility; fifth, expert and opinion evidence; sixth, attesting witnesses; and seventh, books. Under expert and opinion evidence, the author goes on to show that the opinions of expert witnesses are generally held to be admissible in evidence, in all proceedings in which the question arises, thus to assist the jury to decide the question correctly. Previous opinions of experts are not generally admissible in evidence, though they are if they are in the shape of official records or certificates required by law. Vol. II. opens with an able chapter on Alcoholism, the second and third chapters dealing with the legal consequences of alcoholism and the decisions of the court as to alcoholism. A most instructive section of Vol. II. is that dealing with Head Injuries, in which the results of a blow on the head, fracture of the skull, sunstroke, epilepsy, etc., etc., are given in relation to subsequent insanity. One case is cited of a soldier who, at twenty years of age, had his left supra-orbital ridge shattered by a musket-ball, suffering the usual physical disabilities at the time, but, thirty years after, developed traumatic insanity—thus proving that it is not for some time after an injury such as that, that insanity can be excluded as a possible result. The proportion of insanity due

to blows and falls upon the head, overheating and sunstroke, approximate, from among all other forms of mental disease, about 6 per cent. The chapters on Degeneracy and Periodicity are replete with information. Altogether, we must pronounce the book thoroughly complete, and a most valuable contribution to the medical jurist's library. W. A. Y.

The Gross and Minute Anatomy of the Central Nervous System. By H. C. Gardinier, A.M., M.D., Professor of Physiology and of the Anatomy of the Nervous System in the Albany Medical College; Member of the American Neurological Association. Forty-eight full-page plates, and 213 other illustrations, many of which are printed in colors, a large number being from original sources. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1899.

There are few branches of medical science in which it can be said that there is a dearth of books written thereupon, but when it comes to the work of enumerating the number of volumes devoted to the anatomy of the central nervous system, it is safe to state that there is plenty of room for those properly versed in this department to expatiate upon. There is too little known of the anatomy of the medulla oblongata, or the cerebellum, or, again, the region of the third ventricle, to enable the clinician to associate symptoms of nervous diseases with anatomic facts, and correctly diagnose thereupon. One of the most interesting chapters in this work is that upon cerebral localization, by far one of the most important subjects to the up-to-date neurologist. The author makes the plain statement that is settled beyond dispute, that there are fixed areas presiding over motion, language and sight, as also of common sensation, most of the special senses and the higher intellectual faculties. He points out that the cortical area governing motion, known as the motor area, lies on each side of the fissure of Rolando, between the precentral and intraparietal fissures. It is by means of this tract that impulses of voluntary motion originating in this area are conducted to the muscles on the opposite side of the body, resulting in co-ordinating movements. Destructive lesions of this area produce paralysis on the opposite side of the body, with a resulting descending degeneration of the entire cortico-spinal part of the motor tract coming from that side, while irritating lesions cause unilateral convulsions of the opposite side. The author states that to Fritsch and Hitzig belongs the credit of first having established the fact that the application of the galvanic current to certain areas on the surface of the dog's brain gives rise to co-ordinated movements in distinct groups of muscles on opposite sides of the body, while stimulation elsewhere produces no result. It was Ferrier who first pointed out that electric irritation of the pre-frontal region, the temporal, occipital and part of the parietal lobes, was unattended by muscular movement, proving that these areas are not motor in function. The book all through is one which will be found of the greatest value, and will, without a doubt, prove a valuable addition to the literature on this subject.

An Introduction to Dermatology. By Norman Walker, M.D. Bristol: John Wright & Co.

The work is essentially "an introduction to dermatology," carefully considering all the commoner forms of disease of the skin, while at the same time a brief reference is made to the rarer forms likely to be met with by the general practitioner. As a classification, the bugbear of all dermatologists, he sticks fairly closely to the "Histo-Pathology of the Skin" of Unna. In his preliminary remarks the author gives some good advice as to the methods to be employed in getting a history of the case and of finding out the subjective symptoms, avoiding throughout the use of leading questions. He points out, too, a common error that students and practitioners make in looking upon skin diseases as belonging to a category entirely distinct from that of other diseases—an inflammation is an inflammation whether it be in the skin or in the lung. Attention is directed to the fact that while skin eruptions are frequently due to an internal cause, they are mainly caused by some influence from without, and hence, in

arriving at a complete understanding of any given case, one must take into account all the possibilities. One section giving full directions as to the methods of applying external remedies and the reasons for these applications will prove most valuable to the advanced student and the practitioner, for we too often get into a hap-hazard way of treating these cases, and that largely through our ignorance. The author's definition of eczema is a rather good one, but is somewhat amusing, and admits a lot for a Scotchman : "Eczema is the term commonly applied to any wet or scaly inflammation of the skin, of the cause or nature of which the observer is ignorant." Is one to understand that so soon as we overcome our ignorance as to the "cause or nature" of a case of eczema it is then no longer eczema? The work, consisting of 243 pages, is easily one of the best on the market. The text is good, while the plates and diagrams are among the best we have seen. The plates of ringworm, favus, lupus erythematosus and alopecia areata in the frontispiece are particularly good. F. N. G. S.

On the Relation of the Nervous System to Disease and Disorder in the Viscera. Being the Morison Lectures delivered before the Royal College of Physicians in Edinburgh, in 1897 and 1898. By Alex. Morison, M.D. (Edin.), Fellow of the College ; Member of the Royal College of Physicians in London ; Physician in charge of out-patients to the Great Northern Central Hospital, and the Children's Hospital, Paddington Green ; Physician to the St. Marylebone General Dispensary. Edinburgh and London : Young J. Pentland. 1899.

This series of lectures, now published in book form, will be quite an addition to the library of those wanting exact information upon the subject of visceral innervation. The author has divided his subject into (1) The Anatomy ; (2) The Physiology ; (3) The Pathology of Visceral Innervation ; (4) The Disorders of Visceral Sensibility ; (5) The Disorders of Visceral Motion, and (6) Body and Mind. There are few men in a better position than the author to write a book on this subject. He has treated it very concisely, the work being most readable from first to last. The book is printed on heavy paper, and the illustrations are particularly good.

Our Baby : For Mothers and Nurses. By Mrs. Langton Hewer. Sixth edition. 1899. Bristol : John Wright. London : Simpkins, Marshall, Hamilton, Kent & Co., Limited.

This little work of 147 pages is well arranged, has a good table of contents and a good index. The whole book has been carefully revised for the new edition, and more detail has been given to the important matter of artificial infant feeding. The book is a *multum in parvo* for the mother or nurse. It contains no padding, gives just what is necessary and no more. We can heartily recommend "Our Baby" to both mothers and nurses. W. J. W.

Hay Fever, Its Successful Treatment. By W. C. Hollopeter, A.M., M.D., Clinical Professor of Pediatrics, Medico-Chirurgical College of Philadelphia, Pa., Physician to Methodist Episcopal Hospital, Physician to St. Joseph's Hospital, Fellow American Academy of Medicine, etc. Second edition, revised and enlarged. Philadelphia : P. Blakiston's Son & Co. 1899.

This small manual on hay fever is an excellent one. The author gives a digest of the literature of the subject as well as a detailed account of his own methods of treatment. The book is an excellent guide to the management of this widely prevalent and many-sided disease. A. M'P.

The Newer Remedies. A reference manual for physicians, pharmacists and students. By Virgil Coblentz. Philadelphia : P. Blakiston's Son & Co.

This work has passed through two editions. This, the third, has been revised and much enlarged. It is very concisely written and should be in the library of every busy practitioner. It is alphabetically arranged, thus requiring no index. The author has brought it thoroughly up-to-date, and has given us a little volume that will be as creditable to him as his famous "Manual of Pharmacy." A. J. H.

Selected Articles.

CHLOROSIS.

Chlorosis is an essential anemia most frequently met in young women, characterized by a very marked relative reduction in the hemoglobin of the blood.

As to etiology, it is a disease of women, and especially of young women. Yet its occurrence is not impossible in men of womanish habit and occupation, among whom Hermann Eichhorst especially instances tailors. Moreover, while it is especially a disease of young women, from about the age of puberty to twenty-four years, it is also possible in those who are older and younger. In the former it is known as chlorosis tarda, and as such is met in women between thirty and forty. Rather more frequent is its occurrence in children under puberty. Neimeyer held that girls who menstruated at thirteen or fourteen, in whom there was as yet no development of pubis or breasts, almost invariably became chlorotic. The disease occurs the world over, and is apt to be recurrent in the same individual. It is more common in blondes than brunettes, in the weak and delicate rather than the strong and vigorous. Yet this general truth is not without exceptions.

Among predisposing causes are overwork, especially in closely confined and ill-ventilated rooms, insufficient nourishment, exhausting drains, such as prolonged lactation and profuse menstruation. Menstrual derangement is, however, also a consequence, as well as a cause. Sustained or repeated emotion, especially such as arises from sexual excitement or masturbation, is a cause.

The frequent association of constipation with chlorosis led Sir Andrew Clark to suggest that it might really be a copræmia or poisoned blood due to the absorption from the large bowel of poisons of the nature of ptomaines and leucomaines. Such poison may readily interfere with the proper development of the hemoglobin of the blood disc without in a great degree causing its destruction. This view explains what seems a closer relation between chlorosis and pernicious anemia than has commonly been admitted, a relation consistent with the newer etiology of pernicious anemia as well as with features in its clinical course, and with the results of treatment.

Other than the changes in the blood to be considered under symptoms, there is no essential morbid anatomy to chlorosis.

Many years ago Virchow pointed out an imperfect development of the circulatory apparatus as more or less characteristic, that the

heart was small, the right ventricle sometimes dilated, the aorta and its larger branches poorly developed and thin-walled. Such a state of affairs, when present, is probably an accidental coincidence. There is no enlargement of the spleen or lymphatic glands. Imperfect development of the uterus and other genitalia has been noted. The rarity of fatal termination in chlorosis may limit our knowledge of the morbid anatomy, uncertain at best. Of these, the blood changes may be regarded as fundamental, though not absolutely constant. These consist in a decided reduction in the hemoglobin with a moderate oligocythemia, or reduction in the number of red corpuscles. Thus the hemoglobin value of each red disc is diminished. The usual range may be put at from 3,500,000 to little less than normal. Thus Thayer, in sixty-three consecutive cases, in Osler's clinic, found the average 4,096,544, or over 80 per cent.; and Liembeck found the maximum in one of fifteen cases to be but 3,600,000. In a few instances, however, in cases of acknowledged chlorosis, there has been found a more decided reduction in the erythrocytes. One has been reported as low as 1,190,000 per cubic millimeter. The hemoglobin, on the other hand, is much reduced, the average of Thayer's cases referred to being 42.3 per cent., which may be regarded as a fair average. This disproportionate fall in the hemoglobin, while not invariable, remains, however, a tolerably constant feature, producing sometimes a recognizable paleness of color when the blood is seen *en masse*. Along with the lowering of the hemoglobin, as would be expected, since it is a constituent of the hemoglobin, the iron of the blood falls. An increase of alkalescence, announced by Graeber as a constant symptom, has not been found by Kraus in his more exact methods of testing. As to remaining changes, the red corpuscles may be altered in shape to a moderate extent, constituting a small degree of poikilocytosis, or they may be larger than in health, when they are known as megalocytes. More frequent is an undue reduction in size of the corpuscles—a microcytosis. The red discs are sometimes appreciably paler than in health. A very slight degree of leucocytosis may be rarely present, an average of 8,467 in Thayer's counts as contrasted with a mean normal of 6,000 per cubic millimeter, while the blood-plaques in a severe case may also be increased. While the blood alterations in chlorosis are scarcely distinctive enough to be considered diagnostic, the other symptoms help greatly to a correct conclusion. The patient is most invariably a girl, generally between sixteen and twenty, who, although she may have been overworked, does not seem badly nourished; certainly she is not emaciated. She is, however, characterized by a peculiar pallor, often exhibiting a yellowish-green tinge, extending to the lips and especially the mucous membranes, and which is responsible for one of the names of the affection—green sickness. She is extremely weak, especially on exertion, and short of breath. She is subject to vertigo, palpitation of the heart, and even irregularity of the heart's action. Physical examination will sometimes

discover functional cardiac murmurs; also a systolic murmur at the apex, ascribed by Balfour to a relative insufficiency of the mitral valve due to dilatation of the left ventricle. Rarely a compensatory hypertrophy of the left ventricle has been noted, but never actual valvular disease. Sometimes a *bruit de diable* or humming-top murmur may be heard over the right jugular. Epigastric pain is also a symptom at times. It must not be forgotten that a chlorosis late in life, or a chlorosis tarda, does sometimes appear.

The diagnosis is based chiefly upon the age and sex of the patients, the peculiar greenish-yellow color, the paleness of the lips, and the decidedly diminished hemoglobin, unaccompanied. as a rule, with a proportionate reduction of erythrocytes. The same lost normal ratio between the hemoglobin and the corpuscles is also a characteristic of lead-poisoning, which has, however, superadded its own characteristic symptoms, and is almost restricted to adult males.

The epigastric pain mentioned as occurring in chlorosis resembles that more common in ulcer of the stomach. The anæmia which so constantly attends ulcer of the stomach, often in a high degree, is, however, different from that of chlorosis, there being a proportionate decline in the erythrocytes and their coloring matter. A not infrequent error of diagnosis in connection with chlorosis is the mistaking it for a decline—a pulmonary consumption, which it resembles in the pallor, the feebleness and shortness of breath of the patient. The absence of cough and the physical signs of consumption excludes that disease. On the other hand, evidences of tuberculosis should always be sought where the symptoms of chlorosis prevail, while latent cancer is also sometimes responsible for similar symptoms.

The prognosis is nearly always favorable when the disease is recognized and the proper treatment afforded. There are few results more satisfactory in therapeutics than those of a properly treated case of chlorosis. Time is, however, required, and too rapid a cure must not be promised, several months and even longer being sometimes required. The question whether a chlorosis will be transformed into that more serious variety of anemia, known as pernicious anemia, has been raised: This seems not impossible. If the view of Sir Andrew Clark be accepted, that chlorosis may result from the absorption of poisonous substances from the larger bowel, and if pernicious anemia be due to the absorption of more intense poisons from the small intestine, the difference is only one of degree. Both are characterized by defects in the cellular constituents of the blood. In the one, chlorosis, the coloring matter is chiefly wanting, although associated with this is usually found a small degree of morphological defect. In pernicious anemia both cell shapes and coloring matter are defective. In both diseases the oxygen-carrying office of the blood is interfered with, and thus

important vital processes embarrassed, the total suspension of which must be fatal.

Treatment is pre-eminently by iron. The carbonate of iron, in the shape of Blaud's pill, made by a double decomposition between the carbonate of potassium and the sulphate of iron, is at this day very popular, 1 to 3 grains (0.06 to 0.2 gm.) being given at a dose three times a day. But the tincture of the chloride of iron, or reduced iron, or one of the vegetable salts may be given. It is often said that iron is given in too large doses in the majority of cases for which it is prescribed. Most of it is unabsorbed, and therefore wasted. Nay, worse; that which is unabsorbed locks up the intestinal secretions by its astringency, produces headache, and makes the patient otherwise uncomfortable. But chlorosis is one of the few diseases in which large doses of iron are well borne. The reason is plain. It is the iron-holding constituent of the blood which is wanting, and the iron is needed to replace it. The blood is, as it were, hungry for it. A remedy which has, during the past year or two, been giving the best of effects and therapeutic results is Gude's Pepto-Mangan, in drachm doses, three times a day, after meals. This preparation furnishes organic iron and manganese to the blood elements, and will be found to increase the hemoglobin in the corpuscle very materially. If the blood be examined from time to time during the administration of this preparation, it will be found that the percentage of hemoglobin increases from about 30 per cent. up as high as 64 and 66 per cent. In chlorosis, under this remedy, the yellowish color after a while goes away, the breathlessness diminishes, headaches disappear, and lassitude and weariness become a thing of the past, and the young girl after the lapse of a few weeks will in every way materially improve.

Next to iron comes arsenic. The efficiency of iron is greatly aided by union with arsenic, which should be given in increasing doses, but short of toxic effects. But to give these drugs is not alone sufficient. Rest in bed, at first continuous, is imperative to secure a rapid result, and this must be associated with an abundance of good food. Daily massage, except during menstruation, is also a useful adjuvant. There is no condition in which the so-called rest cure is more efficient than chlorosis. With a return of color to the lips, or, better, with the growing increase in the hemoglobin, as measured by the hemoglobinometer, the patient should be permitted to be out of bed, at first a half hour to an hour only, but this should be gradually increased until she is up most of the day. For a long time, however, fatigue should be avoided.

To those who can afford it, a residence at the sea-side materially aids convalescence. Indeed, no condition is so rapidly improved at the proper time by sea air as chlorosis. To the poor, a well-regulated hospital treatment is a boon for which there is hardly a substitute.

JAUNDICE AND ITS TREATMENT.

A DISORDER, for the relief of which medical men are very often consulted, is what is ordinarily known as "jaundice," a complaint which, to the sufferer, is particularly distressing, and may result, if left unrelieved, in chronic hepatic disease. A patient, probably a male of about thirty years of age, comes with the history that he has been sick for ten days or so. He has a severe cough and complains of having been sick at the stomach. There is no swelling about the face or feet; no pain; bowels are regular, and tongue heavily coated. Upon examination, we find dulness marked just below the ribs on the right side, extending downward fully three inches, nearly to the umbilicus. Farther round to the side we get the normal resonance. At the point of most marked dulness we can easily map out a distinct mass, which corresponds to the location of the gall-bladder. If we examine a sample of urine from this case, we will find distinct evidences of containing a large amount of bile. You will observe a peculiar color and also a characteristic foam on top, both of which strongly indicate the presence of bile. When bile is eliminated through the kidneys, more or less albumen will always be found in the urine; so that albumen in the urine is at once presumptive evidence that there is something the matter with the kidneys; but it is not sufficient, you must have the other corroborative tests. Not only is the skin all over the body quite yellow, but the sclera is also tinged the same color; and if the patient be a negro, the pigment often appears as spots under the white sclera. The tongue is big and flabby, filling the whole buccal cavity. The patient evidently has a catarrhal condition of the common duct, blocking it up to a greater or less extent, and causing a reabsorption of the bile into the blood, giving him catarrhal jaundice. The albumen found in the urine is probably caused by irritation resulting from the presence of bile—something which frequently happens. It is a peculiar thing, but is a fact all the same, that a patient under these circumstances frequently complains but little. Most cases of this kind follow an attack of some dyspeptic trouble, some imprudence in eating or drinking They generally have a sick stomach, some nausea, some constipation. After a while they have an uneasy sensation in the region of the liver and stomach; and a few days later follow the symptoms described above. If such could be examined, it would be found that this man's feces were clay-colored. In order to discover exactly whether the foam or the color in the urine is due to the presence of bile, add a few drops of strong nitric acid and you will observe, if bile be present, a play of colors—green, blue, red and yellow. Another and possibly a still more commonly used test is to put a little urine in a test tube, and pour down upon it a watery solution of iodine, and if bile is present a green ring will form at the junction of the two fluids. As to the

treatment of such a case as this is: There is little or no fever, and not much distress; and by opening the bowels thoroughly, and limiting the diet for a while, such patients often make a complete recovery. A treatment which has been highly commended is to flush the bowel with cold water, that is, injection by the rectum of cold water, with the idea of stimulating peristalsis, thus perhaps removing the obstruction and allowing the bile to flow out into the small intestine. Whatever will tend to relieve the congestion or dislodge the concretion, if there is any in the duct, will generally be speedily followed by improvement. As to internal medication, one of the remedies *par excellence* is chionia. This preparation will be found unlike drastic purgatives in that it gently stimulates the liver, and relieves chronic constipation, thus preventing any accumulation and concretion at the opening of the duct. Chionia is best administered in teaspoonful doses three times a day. Good results are obtained from sulphate and phosphate of soda in hot water an hour before meals. In some cases nitrate of pilocarpin, $\frac{1}{8}$ to $\frac{1}{4}$ grain hypodermically, has acted well. As to removing the jaundice, which very often gives rise to great dryness of the skin, accompanied by itching, nothing succeeds as well as salicylate of soda in full doses, say, almost up to the point of tolerance, 30 or more grains a day well diluted. One thing which it is wise to remember is that it is perfectly possible to have jaundice from occlusion of the common duct without having a calculus, and which may be due only to thickened bile or thickened secretion from the common duct. It is therefore wise to be careful not to suspect a concretion or gall-stone in every case in which the symptoms outlined are present. Cases of catarrhal cholangitis are by no means infrequent, and are frequently confounded with malaria.

THE NEUROLOGICAL EFFECTS OF GOLF.

Dr. Irving C. Rosse, late Professor of Diseases of the Nervous System in Georgetown University, is a most enthusiastic believer in the game of golf. In the course of a paper, "Golf from a Neurological Viewpoint," read before the American Neurological Association, he said:

"Doubtless from the sportsman's point of view and that of the hygienist, the value of golf is apparent, but its therapeutic value, not so well established, is practically an untrodden field and in need of an exponent.

"In the capacity of physician and neurologist it is impossible to familiarize one's self with the facts of the game in this relation without seeing its many advantages and acknowledging its merits as beyond all praise.

"To the neurologist who trusts to psychic, mechanical and hygienic influences rather than to drugs for treatment, the theme

is replete with magnificent possibilities of prophylaxis and even of therapeutics. We have a royal road to physical exhilaration in a game that can be played all the year round, independently of atmospheric vicissitudes, during all the seven ages of man, by delicate young girls as well as by strong athletes, and even by decrepit old men whose declining powers do not admit of severe exertion. It combines exercise, pleasure and fresh air without that risk of injury to heart, lungs or nervous system, as is the case in certain other exercises in which there is high blood pressure and arterial tension. There is absolutely no danger attached to the game, and consequently no accidents ensue. Unlike the bicycle, it is doubtful if such a thing as an accident insurance was ever paid for injury incurred at golf. Nor is the game contraindicated in heart lesions, arterial calcification, albuminuria, old age, childhood, or certain hysterical conditions, which would be aggravated by such exercise as bicycling, swimming, horseback riding, or mountain climbing.

"I may say that in all affections marked by slowing of oxidation or in those consequent upon intoxication by the products of organic disassimilation, the game of golf is to be recommended as the best method of bringing about a cure.

"The obesity and degeneration of middle age, when the biceps have diminished and one's energy is failing, may be helped by devotion to golf. The further tendency of the exercise is to eliminate the so-called diathesis, and thus do away with gout, lithemia, headache and dyspepsia, while its hygienic and therapeutic consequences are admissible in cardiac and pulmonary affections. Although moderation is advisable under such circumstances, there can be no doubt of the benefit derived in some cases of cough, nervous asthma and in affections of the bladder and prostate; but it is pre-eminently in functional nervous disease that our great Anglo-Saxon game is to be recommended both as prophylactic and curative. No exercise or recreation is better fitted for the mentally overworked, the hysterical, the melancholic; none helps to preserve the concerted action of eye, brain and muscle, known as the psychological moment; none, perhaps with the exception of swimming, gives one so good an appetite; there is not a more sovereign remedy for dyspepsia, and as to insomnia such a thing scarcely exists among the devotees of golf."—*Selected.*

Physicians Forbidden to Testify.—According to the *Medical News*, on March 13th Governor Roosevelt signed an amendment to the civil code which had passed both Houses at Albany. This amendment absolutely prohibits a physician from divulging any information he may have acquired in his professional capacity concerning any patient, either before or after the latter's death. For a long time the insurance law has permitted a physician to testify concerning the physical condition of a policy-holder.

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PRESIDENTIAL ADDRESS AT THIRTY-SECOND ANNUAL MEETING OF CANADIAN MEDICAL ASSOCIATION, TORONTO, 1899.

BY IRVING H. CAMERON, M.B.

GENTLEMEN OF THE CANADIAN MEDICAL ASSOCIATION,—My first duty is the pleasant one of welcoming you all to the Queen City of the West, and to express the hope that your sojourn here may prove at once pleasant and profitable.

My next duty is to express to you my full appreciation of the good-will and lenient judgment which prompted you to place me in the position of undeserved eminence, which, by your suffrage, I occupy to-day.

"Some men are born great, some achieve greatness, and some have greatness thrust upon them." In the position of the last named I stand at present quite unwillingly; and had it not happened that on the occasion of your last meeting I was absent in England, I should have presumed to correct your judgment, and have pointed out my lack of fitness for the post. Under the circumstances, therefore, it is not too much to ask of you to cast that mantle of charitable consideration with which one so naturally envelopes one's own mistakes over my shortcomings and defects.

It is the fashion on occasions like the present to raise the pean of *Io triumphe*! and to recount the gains and the achievements of the year, or of the decade; but this is done on every hand much better than I could do it, and if the less skilful hand be set to point

out some defects the less occasion for complaint will the auditors possess.

If, indeed, my screed turn out to be a jeremiad, the proneness of the Keltic mind to such indulgence must plead my excuse on atavistic grounds; and the increasing tendency of one's second quarter of a century in the practice of physic to recognize much merit in the men and methods of the past will add its suit in my defence.

The burden of my lament to-day is the overcrowding of our ranks, and the decadence of scholarship in the profession; and I shall best requite your courtesy and confidence in giving me this opportunity to inflict my views upon you by the briefest possible presentation of my subject.

I should do this in any case, however, recognizing to the full the truth of the ancient adage, *Verbum sapientibus sat.*

The fact of overcrowding in the profession is sufficiently obvious to enable me to dispense with a demonstration, and is as well known to all of you as to myself. The same thing is equally true of the other professions which, like our own, are still by courtesy called *learned.*

The church and the bar suffer from the same plethora as ourselves, and in their case the remedy will perhaps be more difficult of application, and equally drastic in action. Your courtesy will doubtless allow me, however, to cite one or two instances in unnecessary substantiation of the proposition. And I need go no further afield than the city in which we meet to look for an illustration.

It used to be considered that a population of 1,000 souls afforded a sufficient clientéle to keep one medical man in reasonable occupation and affluence. But what do we find here? A city of 200,000 inhabitants and 400 physicians! Under the circumstances, these are naturally not of "Toronto's 400." A census of other cities, and of rural districts, will reveal a like condition of affairs; and some three years ago Sir William Mitchell Banks, in his presidential address to the Lancashire and Cheshire branch of the British Medical Association, discoursed upon the same state of the professions at home in England. This year, in France, too, the same subject has been the theme of more than one discourse.

The overcrowded state of the profession being granted, then, what are the evils which flow therefrom?

I make no apology, for none is needed, for answering this question by a long quotation from Mitchell Banks.

Those of you who know the man, or who had the privilege of listening to him in Montreal two years ago, will welcome again the *ipsissima verba* of the master, while they will regretfully miss his inimitable delivery; and those who have not the pleasure of his acquaintance will gladly gather some impression of the man from my selections, while I willingly confess my inability to say what I wish to say with anything like the same felicity:

"At many meetings held during the past year, I could not help

being painfully struck with the often-repeated mention of the very small fees which, in certain of its departments—notably that of midwifery—many members of our profession were forced to accept. It is not that there is anything dishonorable in accepting a small fee. Why, the very smallest fee honorably earned from and gratefully paid by the poorest working-man is a king's ransom, in moral value, compared with the great sums extorted by that prince of quacks, the fashionable London specialist. But what one could not help feeling was, that the physical labor, the mental fatigue, and the harassment and anxiety expended by many of our brethren upon their cases were utterly disproportionate to the value of the fees supposed to remunerate them. Can it be that the mercantile price of medical skill is depreciating in money value? This is not possible. The article, if one may so term it, is of far better quality than ever it was as regards intrinsic worth. Is it the general bad times? No doubt this accounts for a good deal, but the difficulty of making a living in medicine has been steadily getting greater in the large cities and in the manufacturing districts for the last twenty-five years. Are we, as a body, falling in the estimation of the public, who are ceasing to respect us, and who think our skill no longer worth paying for? Quite the contrary. As an honorable profession, medicine never took so high a rank in all its history as it does to-day. What, then, is the cause of this bitter cry from many of the rank and file of our profession, that they can only make their bread by miserable fees, earned by intolerably hard work? Gentlemen, it requires no royal commission to find this out. The simple fact is that, with us as with many other businesses and trades, there are too many of us for it. That is the sum and substance of the whole thing.

"Many circumstances have contributed to this overcrowding. In former days a man of good family and social rank, but whose fortune was not very great, while his children were numerous, could often find places for a son or two in the church or in the army, through the influence of powerful friends. But the days of interest are gone, and these avenues are closed now. As for the bar, the number of the briefless seems ever on the increase, while legal proceedings are actually dimiminishing in number. In business the quiet old trading days are gone, and there is nothing but hurry and conflict, and cheating, and risk. So that the merchant sees in medicine a comfortable sphere of life, where a living can usually be made by any sober and industrious man. Thus the great medical schools have been pouring out a deluge of young practitioners, which has overwhelmed the land. One remembers the story of Abernethy's celebrated address to an audience of new-fledged doctors, which began with, 'Good heavens! gentlemen, what is to become of you all?' It is a good thing for him that he did not live to see the present state of things. It is curious to note, moreover, how we doctors are unknowingly compelled to follow the stream of popular prejudice. At the present day the desire

is for life in towns where there is activity, and energy, and rivalry, and companionship. A quiet life in the country is not in accord with the temper of the times, and men fly to the haunts of men.

"I confess that there is no profession which has such a good excuse for so doing as ours. To make the spark, steel must rub against steel; in order to progress, brain must struggle against brain. But, as a result, the overcrowding of our towns has only become all the more marked. There used to be many quiet old villages in England, where the doctors succeeded each other from father to son for three and four generations, and where the inhabitants did not believe there could be any doctors worth talking about except those who had supported their fathers' and mothers' heads as they lay a-dying, and who had brought *them* into the world; but those days are gone, and our business is not to lament the past, but to do the best for the present.

"Being, then, face to face with the facts that there are so many doctors in our cities and manufacturing towns that a man must live a life of incessant labor and turmoil even to exist, and that in many cases he cannot even do that. What is the disadvantage to the public in this? For it is right to take note of them as well as of ourselves. I have heard it argued by business men that there cannot be any harm in this, seeing that competition has compelled men to exercise every mental gift they possess, so as to excel each other in manufacturing things at a cheap rate, by which means the public have been great gainers. This, I admit, is perfectly true, but, as it happens, there is an immeasurable gulf fixed between the capacity of the ordinary man or woman to judge of the value of articles of commerce, and their capacity to judge of the value of medical skill. Every man who has long taught students becomes sententious; he invents proverbs. I have long ago invented one to the effect that in religion and medicine the public like being quacked; they deliberately prefer it. Just look round the circle of your acquaintances. They understand a business bargain. You can't take them over in buying a house or a piece of land. They appreciate to a penny the wares of the green-grocer or the milliner. But you have only to take a bread pill and "bill" the intervening space from the pyramids of Egypt to the cañons of the Rocky Mountains with posters, which announce that it will cure every disease from chicken-pox to cancer, and you will make a huge fortune, which you will, no doubt, bequeath to charities when you die, as a kind of *quid pro quo* for having robbed your fellow-men during a long lifetime. A man comes to consult you whose ailment is clearly due to his manner of living. You give him honest advice about this, show him how he must alter his habits, and tell him he doesn't require physic. He has no sooner got onto your doorstep than he proclaims you a fool, and proceeds to dose himself with Elliman's Little Kidney Pills, or Beecham's Embrocation, or Siegel's Gore Mixture. Both in his religion and in his medicine the average man doesn't want to hear common sense; he

wants to have something that will cure his soul or his body at once by some supernatural means; and if you can lie hardily enough to him he will swallow any dogma or any pill you like to stuff down his throat, and pay handsomely for it, too. I cannot be accused of exaggerating when one considers the vast numbers of persons who have voluntarily paid for Harness' electric belts and Count Mattei's cure for cancer. But the result of all this to us, as a profession, is very serious, for it is a direct inducement to us to prey upon the credulity of our patients, and I do not believe there is another body of men to be found anywhere which makes such strenuous efforts to be honest as we do, in spite of very great temptations to the contrary. If any man among us chooses to cut himself clean adrift from the society of his honest brethren, and to set up as an out-and-out daring charlatan, he is at any rate sure of making plenty of money if only he will take for his motto, '*L'audace, toujours l'audace.*' Let us pursue the argument a stage further. Let us suppose a condition where, owing to there being more men than there is work for them to do, a certain number see no prospect of earning a decent living before them. What are they to do? It is all very well for Monsieur Talleyrand to tell the poor devil who said that he had to live, that he saw no necessity for it. The poor devils insist upon living in spite of Monsieur Talleyrand, and if they cannot live honestly, well, then they will live the other way. Go down any big street in the north end of Liverpool, and before you have gone far you will come on a shabby-looking shop, which has evidently remained empty for a long time till occupied by the present tenants. The window is blackened, but its dulness is relieved by gold letters which inform you that this is a dispensary; that Dr. Dosem, physician, surgeon, and accoucheur is in attendance from 9 a.m. to 9 p.m.; that medicine and advice are given for the moderate sum of sixpence, or even threepence, and that vaccination is performed at a phenomenally low figure. If you come back in a month or two you will find that the dispensary has been let to a green-grocer, but Dr. Dosem has transferred his large and lucrative practice to another shop in a back slum of Manchester. Many of you are medical officers to clubs, and have been waited upon by the representatives of these clubs to know what is the very lowest figure at which you will take them. In the course of a week you learn that a neighboring practitioner, two streets off, has been entertaining these gentlemen to pipes and whiskey and water in his best sitting-room, and that he has agreed to take them at sixpence a head less than you had announced as your minimum. Others of you having gathered around you a comfortable practice can remember how a practitioner from a neighboring village planted in a house close to you one of those wretched Helots of medicine, known as unqualified assistants, to whom he acted as 'cover,' while his slave sweated in the pleasant task of undermining your practice by under-selling you. Thank God! the medical Council has pretty well succeeded in

stamping out such proceedings, well stigmatized by them 'infamous' from a professional point of view. And still there is a lower depth, for in every big city you will find qualified men sitting in shops of, and openly abetting, those pests of society, the dealers in mysterious remedies for venereal diseases, whose advertisements, with singular appropriateness, adorn the walls of the public urinals.

"If you ask, gentlemen, how these miserable things can be done by educated gentlemen, the members of a liberal profession, I reply that these are not educated gentlemen. They are men who should never have been in the ranks of our profession at all. They are, I admit, sorely tempted. Mostly they have wives and children depending on them, and clamoring for bread. Practice does not seem to come their way, and still the butcher and the baker must be paid; and so they naturally say to themselves, if we cannot live honestly, we must live as best we can. I am charitable enough to believe that this is the case in the majority of instances, but there are not a few men who have simply the instincts of small shopkeepers. Their point of view of practice is identical with the point of view of a small grocer or third-rate chemist as regards his 'takings.' They adopt, positively by choice, the mean and sordid part of their profession. One of these men frankly told me, some years ago, that he did not care a fig for his profession, nor for the respect of his professional brethren. He wanted to get hold of money, and money he would have however he got it.

"I need not dwell further upon this very painful side of professional life. You are all too well acquainted with it."

Another evil of this overcrowding to which, however, Mitchell Banks does not allude, is an undue growth of specialists. Young men entering the profession—oftentimes men of enterprise and ability—finding the general-practice avenues to employment and emolument thronged by a jostling crowd, seek by-paths to the attainment of their goal and speedily blossom out into full-grown specialists, whose opportunities of attracting attention (not to say advertisement) are so much greater, whose fees are so much larger, and whose lives are made up of so much less laborious days and nights of uninterrupted ease and enjoyment. The temptation, indeed, is great!

But I would not be misunderstood as decrying a proper specialism in practice. When cases of a certain kind accumulate in sufficient number to confer upon an individual special skill and experience in their management, it is highly proper for him to devote himself to their treatment, and much to the advantage of all concerned, for he will bring to bear upon his special work a mind well developed by general experience and well stored with the facts of general pathology. The mutual inter-dependence of all parts of the animal economy renders it imperative, in my mind, that the specialist should grow out of the general practitioner, or else be prepared for his special work by long residence on all sides of a general hospital (including the pathological department).

Otherwise he may possess consummate technical skill, but nine-tithes of time his knowledge will be as nothing to that of the family physician, who adds to a liberal stock of general information an acquaintance with disease in general, and a knowledge of his patient, root and branch.

But the good old-fashioned practitioner is dying out, and my jeremiad would be incomplete indeed if it did not bemoan the passing of the family doctor, and, in the day of automobiles, that other noble and useful animal, the doctor's horse.

Of the other branch of my subject, "The Decadence of Scholarship in the Profession," I have but scant time to speak.

That the literary side of the preliminary preparation for a medical education is nowadays too much neglected, and that a low level of scholarship obtains and is accepted is abundantly evidenced by the characters of the answers given to examination questions, and by the questions themselves, by the applications and and petitions of medical students to the various governing bodies, and by the formal announcements and kalendars of the medical colleges themselves.

A comparison of the literary style of the medical text books of to-day with that of the past generation enforces the same conclusion.

Now, this defect of scholarship is associated with, and to my mind, too oft begets defect of manners; and the courtesy and old time courtliness of professional intercourse is rapidly disappearing.

The pupil no longer greets his master with the outward evidences of profound respect, but commonly meets him on terms of equality. The practitioners of our art no longer manifest in their public intercourse and private conversation that deference which characterized the gentlemen of the old school. Nor is this decline of manners restricted to the lower walks of the profession—the student and the practitioner—but it has invaded with no less subtlety and certainty the higher ranks of the consultant. The time was when the consultant did not seek to glorify himself at the expense of the family doctor, and when the welfare of the patient was their united, single aim. Then, *after* consultation, the family doctor expressed to the patient and his friends the result of the deliberations and the plan of campaign jointly proposed. Nothing was said of differences, for these had been talked over and effaced, and no statements or suggestions were offered tending to exaggerate the lay estimate of the importance of the wide experience and profound learning of the consultant or so-called specialist. *During* the consultation in the endeavor to arrive at a unanimous conclusion, sight was never lost of the deference due to the family physician who had a special knowledge of the patient and his heredity, widely cultivated powers of observation, and a mind well-practiced in the weighing of evidence. In the case of palpable or established error on the part of the practitioner, the educated consultant, quickly responsive to the dictates of the instincts of a gentleman, remembered the adage so well expressed by Pope:

"Men must be taught as though you taught them not,
And things unknown proposed as things forgot."

In brief, the golden rule was the rule of conduct in consultations.

In those good old days the crowning disgrace of latter day consultations was utterly impossible. A man who then proposed in consultation (as has been openly advocated in a journal published in St. Louis, Mo., in the interest of the most absurd and irrational of all so called specialties, Abdominal Surgery and Gynecology, and as has been done, I am told, by at least two practitioners in our midst) that an operation should be performed by the consultant and a commission be extracted from the patient for the benefit of the practitioner referring the patient, would undoubtedly have been arraigned before a competent tribunal on a charge of conduct infamous in a professional respect; yet this line of conduct is now openly urged on the plea of equity and justice to the family physician. Truly the commercial spirit, the instinct of the tradesman has infected a once noble and honorable profession with a destructive, nay, a fatal virus.

Now I venture to group these two crying evils of our time—the overcrowding of the profession and its decadence in scholarship—together, because I believe the remedy for both is one and the same. Hear again what Mitchell Banks says upon the subject:

After referring to the failure of attempts to suppress quackery and illicit practice by legal process owing to technical quibbles and the sympathy of juries stimulated by the cry of oppression, and the inability of the General Medical Council to put down all the rascals in the profession, even if they sat all year round, he urged upon the attention of his hearers the expensiveness of the process, citing one case in which the attempt to secure legal conviction cost the profession £600 and accomplished nothing. He then directs his attention to the suggestion that the severity of the professional examinations should be increased, and on this point he says: "I can confidently affirm (from my experience in the General Medical Council and in the College of Surgeons) that it is not possible at present to add to the burden of examinations which the medical student has to bear without doing more harm than good. You can go on, no doubt, adding subject to subject, and examination to examination, but by doing so you only drive the student into further and further cramming. His serious defect at present is that, owing to the eternal cramming to which he is compelled to have recourse in order to master his subjects he loses all power of thinking or reasoning for himself. He is being reduced to a mere grinding machine, which has to be stoked up with scientific pabulum.

"Well then, you ask, what is my remedy? My remedy consists simply in stiffening up the entrance examination. I hold that there ought to be a rough sieve applied at the very beginning, and that all who cannot get through this sieve should be cast on one side. As things stand at present any man who gets through an

entrance examination will ultimately get a qualification of some kind which will enable him to put "Doctor" on his door plate with just as much effect as a graduate in honors of the London University. Your cannot hinder him from this by any amount of scientific or professional examinations. He will rub through these bit by bit. Any teacher of experience will tell you how futile it is to attempt to turn back a man who has once passed an entrance examination, if that man is determined to go on. Besides it seems to me unfair to allow an inferior man to enter upon a course of professional studies for which he is obviously unfitted. He ought not to be allowed to get so far. He should be turned back at the very commencement, and not encouraged to throw away years of unavailing work. It has been said that if only those who have had a really good preliminary education are to be allowed to enter the profession, you may keep back many poor but struggling geniuses, who might afterwards make great names for themselves. Well, there would be reason in this argument if we were in want of men to join our ranks, but when our object is to keep out applicants, the persons to be kept out are the badly educated, underbred ones. They will be far happier as decent tradesmen, in positions where their manners and their ways of thinking will not be out of place. When admitted among us they simply hold us down, and the few heaven-born geniuses among them would never be missed." To secure uniformity Mr. Banks thinks the entrance examination should be under the control or inspection of the General Medical Council.

And, if we are to have a General Medical Council of education, examination, and registration for the Dominion—a consummation devoutly to be wished, and which your deliberations and endeavors at this session may almost make an accomplished fact—which Dr. Roddick's strenuous efforts and untiring zeal have brought so nearly to an accomplishment, an achievement upon which I now offer both you and him my warmest and most sincere congratulations—if such a body, I say, be now happily about to be constituted, then, following the suggestion offered by Sir Wm. Banks, this most important duty of regulating the standard of entrance might well be entrusted to it.

But it is upon the character and quality of this entrance examination that I feel most strongly, and the strength of my feelings forces me to the imprudence of trespassing further upon your patience.

Dr. MacNeill, of Stanleybridge, P. E. I., presented this matter most forcefully and skilfully to the Maritime Medical Association, at its meeting last month, and I heartily commend his address to your perusal as a most powerful argument in support of my position. *Maritime Medical News*, August, 1899.

I am not of those who think that a degree in science alone is the proper and essential precursor of entrance upon medical studies, but I hold strongly to my ancient faith in the *literæ humaniores*—

the basis of what was called in my younger days "The education of an English gentleman"—as the proper substratum and foundation work upon which to build the superstructure of a professional education. Such a course is particularly suited for the medical practitioner, doing away largely with the evils above complained of, by exacting a higher degree of culture and refinement, thus diminishing the internal pressure of numbers, and, by the establishment of a higher sense of professional character and conduct, effacing many of the crudities and barbarities which now obtain, for, as Ovid long ago averred, "*Emollit mores nec sinit esse feros.*"

That nothing short of the highest and best preparation will do for the medical profession you, of course, will all readily admit, but it is a peculiar source of gratification and encouragement of high ideals to find a man of so much eminence, of such genuine refinement, and of such a wide experience of men and manners as Lord Roseberry, affirming, as he did on last Prize Day at Epsom College (July 29th), the association of which with the profession is peculiarly close, that "The medical profession in its science contained perhaps the most supreme elements of manhood of all the professions"; and in the development of this "manhood" the headmaster (the Rev. T. N. Hart-Smith) on the same occasion said "Their aim at Epsom College was to train the boys on sound principles, so that they might have a good general education—and by sound principles he meant classics and mathematics—and to turn out, not necessarily scholars and prize winners, but boys of the right stamp who were able to set an example in whatever situation they might be placed." Such boys are doubtless the fathers of the right stamp of men.

But not only for the vocation of medicine, amongst scientific pursuits, is literary culture valued, for we find Sir J. Norman Lockyer, in the address which he delivered a year ago at the Royal College of Science on the "History of Scientific Instruction," concluding thus: "I have referred previously to the questions of secondary education and of a true London University, soon, let us hope, to be realized. Our college will be the first institution to gain from a proper system of secondary education, for the reason that scientific studies gain enormously by the results of literary culture, without which we can neither learn so thoroughly nor teach so effectively as one could wish."

Let me not be misunderstood, however. I have no desire to force all our students to become "Grammarians," to be able to "settle *Hoti's* business, properly base '*Oun*,' or give us the doctrine of the enclitic '*De*,'" but I would have them realize to the full the truth of the remark made by Dr. John Brown in the post preface to his "Horæ Subsecivæ," now forty years ago:

"Latin and Greek are not dead—in one sense they are happily immortal, but the present age is doing its worst to kill them, *and much of their own best good and pleasure.*"

I feel no keener sense of gratitude to any man than I owe to

the memory of the late Dr. Morden, of Brockville, who gave me my first copy of Dr. Brown's "Spare Hours," a few years after they were published, and from which I learned the wisdom which that quoted sentence inculcates.

The preparation, then, which I would require all candidates in the medical faculty to have undergone in their own best interest, as well as in that of the profession, would be such a literary training as is involved in what we call in the University of Toronto "the general course," and which comprises *inter alia*, the subjects of Latin and Greek, French and German, astronomy and physics, biology and geology, philosophy, history, and political economy. Having graduated in this course, after three or four years of study, I would have them then proceed to the faculty of medicine, and devote the first two or three years therein to those branches of science which are immediately ancillary to medical knowledge, viz., biology (including physiology), human and comparative anatomy, chemistry and materia medica; and the final three years should be spent in the clinical laboratory, the hospital and the *post-mortem* room, on the walls of which should always be inscribed, as it was over the door of the mortuary of the old Hotel Dieu in Paris, "*Hic locus est quo mors gaudet succurrere vitae.*"

Having completed such a course with diligence and honesty, the new-born physician would enter upon his career of honorable usefulness with commingled modesty and confidence, and the evils which I have bemoaned at such length would cease in the land.

One other, and a painful duty remains to me before I close. It is to make mention of the diminution of our numbers by the inevitable emigration to "the great majority." Were the roll to be called to-day of those who were active in the Association's work when I joined the ranks five-and-twenty years ago, scarce a corporal's guard would answer to their names. Of the rest it would have to be recorded "*abiverunt ad plures*" or "*emigraverunt.*" And of the corporal himself, then secretary of the mess (Osler), it would have to be told that though happily still present in the spirit the absent flesh had sought "fresh woods and pastures new." How well for us if he could only have deferred it until "to-morrow."

My coranach to-day is "but an echo of the moan for these" and the names I mention, with averted head and the hand thrice filled with dust, are H. H. Wright, of Toronto; Charles Robinson, of Brampton, original members of the Association; and J. H. Mullin, of Hamilton; H. P. Wright, of Ottawa, and J. E. Graham, of Toronto, who were contemporaries with myself in 1874. Only three of these, Dr. Mullin, Dr. H. P. Wright, and Dr. Graham took a continuously active part in the work of the Association, and the memory of their service demands a word of acknowledgment. Of these three Dr. Mullin alone had passed the meridian of life, and with him the shadows had scarcely begun perceptibly to lengthen until a year before his death. The last occasion on which I remember to have seen him in Toronto was at the meeting convened by

Dr. Roddick to discuss the question of interprovincial registration. But then the shadow of the shadow that waits for men was creeping on apace.

Throughout his professional career of forty years, Dr. Mullin wore in simplicity and modesty, "the white flower of a blameless life." Of his many private virtues I shall not speak. Of his professional character I may say in brief, that he was throughout, both to the great corporation which he served so long and faithfully and well, and to his private patients a most devoted and reliable "guide, philosopher and friend;" to his brethren an "ever-present help in time of trouble," and to us all a bright example to emulate and follow.

Of my late, lamented colleague, Dr. J. E. Graham, close association makes me speak with some reserve. I may, however, without impropriety say, what I think all will readily admit, that he was the father in this country of clinical teaching as we now have it; that he gave a great impulse to the study of dermatology and of pathology amongst us, and that from start to finish he held high aloft, unflickering and undimmed, the lamp of science to guide our footsteps and his own. He was himself a beacon for our steering, and setting an example of assiduous application, patient perseverance, indomitable energy and pluck, personal probity and large *esprit de corps*, combined with ability and common sense, he showed the way, in spite of enervating influences within, to scale the rugged rocks of opposing difficulties and reach the heights of professional recognition and reward.

To refer to Harry Wright, of Ottawa, as he was always affectionately called, in terms of moderation is no easy task. Save Osler alone, I know of no man ever in this Association who became in the same degree the personal friend of every one of us. His personal magnetism knew no bounds nor obstacles. Peculiarly situated in that he enjoyed the largest practice in the Capital, he became through the members of both Houses of Parliament intimately known throughout the length and breadth of the Dominion, and from the highest to the lowest in the land, he was everywhere regarded as a true personal friend, a tried and trusted counsellor.

That without notice of his sailing, and free from "the sadness of farewell," he crossed the bar, was a great shock and grief to his innumerable friends, for Harry Wright was manifestly a favorite of the gods.

"And him on whom, at the end
Of toil and dolour untold,
The gods have said that repose
At last shall descend undisturb'd—
Him you expect to behold
In an easy old age, in a happy home;
No end but this you praise.
But him on whom in the prime
Of life, with vigor undimmed,
With unspent mind, and a soul,

Unworn, undebased, undecayed,
Mournfully grating the gates
Of the city of death have forever closed—
Him, I count *him*, well starr'd."

The last time the Association met in the city of Toronto (1889). H. P. Wright was president. But it was only a business meeting here, and the Association immediately adjourned to Banff. There it was his grievous task, very lovingly performed, to speak to the Association on the loss it had sustained through the premature death of his uncle, Dr. Robert Palmer Howard, of Montreal, one of the strongest minds ever associated with us, and *facile princeps* in Montreal's always strong contingent. That I am called upon to-day to do a similar office for himself fills me with grief, for "I owe more tears to this dead man than you shall see me pay."

While memory holds her seat in our distracted globes Harry Wright will never be forgotten; and the recollection of him will linger longer still, when our haunts of memory echo not, in the records of the hospital which he did so much to found and to foster, thanks to the munificence of that dear wife who was indeed "a helpmeet for him."

Of all these dead friends alike I take my leave in the time-honored words: "*Fratres, uvete atque valete!*"

"*Si quis piorum manibus locus, si, ut sapientibus placet, non cum corpore extinguuntur animæ magnæ, placide quiescatis!*"

One word of cheer and I have done. Amongst the recipients of the last "birthday honors" men noted with applause the names of Sir John Burdon Sanderson, Sir Michael Foster, and Sir William Mitchell Banks. These honors were not bestowed for political reasons, for special service to the Sovereign, or to the State as such, but simply in recognition of scientific labors conducted in the laboratory, the dissecting-room, and the ward. That two physiologists and a surgeon-anatomist should be selected for this distinction bodes well for the future of our art, the hope of whose progress and development is wholly based upon our science!

As your mouthpiece on this occasion let me offer to these gentlemen, our masters and teachers of old, our warmest and sincerest congratulations upon the recognition by the Fountain of Honor of their great merit, worthiness, and deserts. Let us wish them long life and happiness to enjoy these honors which were never won more worthily, and which none will wear more "lightly as a flower." "*Floreat Res Medica!*"

CHRISTIAN SCIENCE.*

BY J. H. RICHARDSON, M.D., M.R.C.S. (ENG.), TORONTO.

WHEN it was suggested that I should read a paper before this Association upon the subject of Christian Science, I willingly consented, not because it was intrinsically worthy of five minutes attention from any rational being, but because it seems to me imperative that the medical profession should have more definite knowledge of its claims and teachings than can be found in the reports of lectures which appear from time to time, which do not give the faintest idea of the real nature of this so-called Christian Science.

The time at my disposal necessitates but a brief synopsis. I can merely quote extracts bearing upon the large majority of its teachings, confining more extended notice to such as seem to me to be of importance.

The quotations I will give will be mainly from the authorized text-book, "Science and Health, with Key to the Scriptures," but some will be from Mrs. Eddy's "Miscellaneous Writings," which, along with all her other published works, profess to be inspired.

"Science and Health" commences with the declaration: "In the year 1866 I *discovered* the science of metaphysical healing, and named it Christian Science. God had been graciously fitting me during many years for the reception of a *final revelation* of the absolute principle of scientific mind-healing."

In what this fitting consisted she does not tell us, but it appears to have been a dabbling in spiritualism, clairvoyance, hydropathy, homœopathy and mesmerism, and in being a patient and pupil of one, Dr. Guimby, who practised mesmerism and mind curing, and attained a wide reputation in the State of Maine during the first half of the century for his marvellous cures.

In 1862, Mrs. Eddy (then Mrs. Patterson) went to Portland to obtain his valuable services for the relief of an illness which, she says, had made her a hopeless invalid for over six years. The exact nature of this illness is not stated, but any experienced physician will have no difficulty in diagnosing the case as one of common occurrence amongst a certain class of females, from the fact, as stated by herself, that "in less than one week after she visited Dr. Guimby she ascended by a stairway of 180 steps to the dome of the city hall." Mrs. Patterson remained in Portland for some time, and had frequent opportunities of becoming acquainted with Dr. Guimby's method of treatment, which he described as follows, in a circular distributed in Portland about that time: "My practice is unlike all medical practice. I give no medicines and make no outward applications, but simply sit by the patient, tell

* Read before the Canadian Medical Association, August 30th, 1899.

him what he thinks is his disease, and my explanation is the cure. If I succeed in correcting his errors, I change the fluids of his system and establish the truth or health. The Truth is the cure."

In 1862, three weeks after her cure, Mrs. Patterson (Eddy) published an article in the Portland *Courier* eulogizing Dr. Guimby's method of cure, in which she expressly repudiates the ascription of her cure to spiritualism or mesmerism. After Dr. Guimby's death in 1866, she published "lines to his death," commencing "Did sackcloth clothe the sun, and day grow night?" etc.

In that same year Mrs. Patterson (or Eddy) met with an accident, which seems to have brought back her old disease. She tells us (M. W. 179): "In 1866, God revealed to me this risen Christ, and I was delivered from the dark shadow and portal of death. My friends were frightened at beholding me restored to health. A dear old lady asked me, 'How is it that you are restored to us? Has Christ come again on earth?' 'Christ never left,' I replied; 'Christ is Truth, and Truth is always here, the *impersonal Saviour*.' Then another person, more material, met me, and I said *in the words of the Master*, 'Touch me not!'"

Such was the commencement of this so-called Christian Science. Mrs. Eddy's works abound with blasphemous utterances, but, I confess, none are to me more revolting than this appropriation of the words of the crucified Saviour by Mrs. Eddy. After this you need not be astounded at any of her pretentions to inspiration or infallibility, however extravagant and unfounded.

Four years afterwards the first pamphlet was copyrighted, but "it did not appear in print until 1876, as she had learned that 'this science must be demonstrated by healing before a work on the subject could be *profitably published!*'" (Preface to "Science and Health" IX.)

Twenty-one years after Dr. Guimby's death, when Mrs. Eddy's claim to the discovery of the science of mind healing was being contested by Dr. Guimby's friends, Mrs. Eddy had the cool effrontery to pronounce Dr. Guimby an "ignorant mesmerist," and to say, in explanation of her eulogistic article published in the Portland *Courier*, and her lines to his death, "that her head was so turned by animal magnetism and will-power under his treatment, that she might have written something as hopelessly incorrect" as the articles referred to.—(*Christian Science Journal*, June, 1887.)

Mrs. Eddy attributes her wonderful discovery to homœopathy. Her words are: "Years of practical proof through homœopathy revealed to me the fact that mind, instead of matter, is the principle of pathology."

The influence which homœopathy still exerts over Mrs. Eddy's doctrines, is shown on p. 46 "Science and Health": "The author has attenuated common salt until there was not a single saline property left, and yet, with one drop of that attenuation in a goblet of water, and a teaspoonful of the water administered every

three hours, I have cured a patient sinking in the last stage of typhoid fever."

"The highest attenuation of homœopathy, *and the most potent*, steps out of matter into mind," on page 50. "Homœopathy mentalizes a drug with such repetition of thought-attenuations that it becomes more like mortal mind than the substratum of mortal mind called matter, and its power is proportionately increased."

More astounding still, this doctrine of the infinitesimal applies not only to drugs, but even to truth itself. Page 47: "You say a boil is painful, but that is impossible. The boil simply manifests your belief in pain through inflammation and swelling, and you call this belief a boil. Now, administer mentally to your patient a high attenuation of truth on the subject, and it will soon cure the boil," *i.e.*, as an attenuation of salt, so high that not a single particle of salt remained, cured her typhoid fever patient, so a high attenuation of truth, so high that not a vestige of truth remains, will soon cure boils.*

Claims of Christian Science.

On p. 311 "Miscellaneous Writings," Mrs. Eddy declares: "The works I have written on Christian Science contain absolute truth, and my necessity was to tell it. I was a scribe under orders, and who can refrain from transcribing what God indites?"

On p. 551, "Science and Health," she declares that "Science and Health" is the "little book" brought down from heaven by an angel, as described in the Apocalypse. Page 579: "It is the Holy Ghost." Page 167: "It is the Divine Comforter." Page 12: "The second coming of Christ." "It blots out all our iniquities." "It adds to the Divine glory." It is the child referred to by Isaiah: "Unto us a Child is born . . . and his name shall be called Wonderful" (p. 3).

Wonderful it certainly is. To ordinary mortals it seems to be a weary repetition of absurdities, contradictions, blasphemies, and puerilities, but Mrs. Eddy attributes this to their want of good morals. All difficulty in understanding Eddyism disappears in the pure minds of children. In "Miscellaneous Writings," p. 433, Mrs. Eddy quotes the experience of a mother: "My little one was a trifle over one year old. I was trying to overcome a claim (jargon for disease). One day as I sat near and treated him, it occurred to me to read aloud. I took up "Science and Health," began at the words 'Brains can give no idea of God's man,' and

* The high attenuations commence at the 30th and run up to the 200th (Homœopathic Pharmacy, London, 1850, p. 39). "Expressing the 30th attenuation arithmetically, a dose amounts to

$$\frac{1}{1{,}000}$$

part of a grain or drop, or one drop out of an ocean, 140,000,000,000,000 times as large as our whole planetary system" (see Sir James Simpson, "Hy. and its Tendencies," 1854, p. 296).

read on for two or three paragraphs, endeavoring to understand it myself, yet thinking that the purer thought of the babe might grasp the underlying meaning sooner than I. So it proved," and the baby was healed.

FUNDAMENTAL PROPOSITIONS OF CHRISTIAN SCIENCE.

Page 7: "The fundamental propositions of Christian Science are summarized in the four following, to me self-evident propositions:

"1. God is All in All.

"2. God is good.

"3. God, Spirit, being All in All, nothing is matter.

"4. Life, God, one omnipotent good, deny death, evil, sin, disease, and *vice versa*."

Although these propositions are self-evident to Mrs. Eddy, she proceeds to prove them by inspired logic. Page 292: "It should be understood that error is nothing, and that its nothingness must be demonstrated in order to prove the somethingness—nay, the allness of truth." Page 183: "We call the absence of truth error. Truth and error are opposites. Truth has no opposite. Therefore error is unreal."

I hope your morals are pure enough to enable you to appreciate the force of this powerful argument. It is very simple. We must prove error to be nothing in order to *prove* truth to be something, and we do so by *assuming* truth to be something—nay, everything.

Mrs. Eddy's logic seems to be a sort of patent, reversible, double-back-action kind. It will take you anywhere you desire to go to, round and round, backwards or forwards; all depends upon how you start.

For instance; you wish to prove the nothingness of good:

1. Poverty is real, poverty is evil.
2. Evil is the opposite of good.
3. Therefore good is unreal.

Here is another specimen of Mrs. Eddy's inspired horse-chestnut, chestnut horse logic. Page 7: The metaphysics of Christian Science prove the rule by inversion. For example:

"There is no pain in truth, no truth in pain.

"No matter in good, no good in matter."

According to which logic by inversion

There is no porridge in good, and no good in porridge; or

There is good in porridge, and therefore no porridge in good.

Once more. Page 385: "A blundering dispatch, mistakenly announcing the death of a friend, occasions the same grief that his real death would bring. You think your anguish is caused by your loss. Another dispatch correcting that mistake heals that grief, and you learn that your suffering was merely the result of your belief. Thus it is with all sorrow, sickness, and death. You will learn at length that there is no cause for grief, and Divine wisdom will then be understood."

Divine wisdom! Was ever greater nonsense? Because a "blundering dispatch" caused me anguish therefore there is never any "cause for grief," no such thing as "sorrow, sickness, and death;" it is all a matter of belief. Standing in the presence of a dead friend I may be spared my grief if I can believe that he is still alive, but if I persist in asserting that he is not dead I will assuredly be deemed a fit subject for an insane asylum.

Having logically annihilated evil, sin, sickness, and death, Mrs. Eddy is still confronted with the phenomena of corporeality and materiality. She admits that she has a body when she speaks of her corporeal presence (M. W., p. 152). She admits the possibility of the body being killed (p. 69). That man is mortal (pp. 332, 251). That man can suffer and be in "terrible" agony (p. 69). That man possesses corporeal senses (p. 174), and to meet this difficulty she conjures up a bug-a-boo which she calls "mortal mind," and invests it with diabolical malignity, and almost omnipotent power. This mortal mindis cruel and merciless, it punishes the innocent. "Electricity, governed by this so-called law of mortal mind, sparkles on the cloud, and strikes down the hoary saint. Floods swallow up homes and households; and childhood, age, and manhood go down in the death-dealing wave. Earthquakes engulf cities, churches, schools, and mortals. Cyclones kill and destroy" (p. 257), etc., etc., *ad nauseam*. This term "mortal mind" is to be found in almost every page of "Science and Health." What it is and what it does require over two hundred references in the index. "It builds the body" (p. 70). "It and the body are one" (p. 146). "It has *material* consciousness only" (p. 188), whatever material consciousness may mean, but "It is not material" (p. 396). "It deserts the corpse which then is cold and decays" (p. 26), although she elsewhere tells us "the body cannot die" (p. 424). "It affirms that the body is dying, and that it must be buried and decomposed, but that is not so" (p. 527); although on page 26 she has declared that "the corpse deserted by thought *is* cold and decays."

"It is the source of contagion" (p. 47), etc., etc. According to this astounding theory every man carries about with him a veritable diabolus, from which proceed envy, hatred, malice, war, famine, pestilence, and death; but whence came these infernal agents? Surely all the horrors enumerated as products of "mortal mind" are *evils* and *realities*. What imbecility to try and get rid of them by shifting them on to the shoulders of a suppositious "mortal mind." God, we have been told, is good, and God is all in all, and therefore there can be no evil. Whence came this mortal mind, which is in itself the embodyment of all evil? Mrs. Eddy is quite equal to meet the difficulty. With one swoop of her pen she annihilates her own creation, and pronounces "mortal mind" itself to be an illusion (p. 398). "It has no reality" (pp. 283, 483). "It implies something untrue and therefore unreal, and is meant to designate something which has no real existence" (p. 7). She attributes this to the paucity of language, and with wonderful

wisdom says: "In expressing the new tongue we must sometimes recur to the old and imperfect, and the new wine of the spirit has to be poured into the old bottles of the letter," to the inevitable destruction of both, I may add.

As a proper designation of something which "has no real existence," something which is untrue, something which is merely an "illusion," if permitted, I should suggest the term "ridiculus mus."

As to sickness, sin and evil being merely illusions, as Mrs. Eddy declares (passim), we need only to test the theory by applying it to poverty. It seems possible to make some people believe they are well when they are sick; to make more believe that the only sin is the belief in sin (p. 444); to make some even believe that the corpse lying in the coffin is only an illusion; but it would be devilish mockery to proclaim that the privations and sufferings of starving millions are merely illusions. Eddyism may be acceptable to the well fed, well clad, self-satisfied followers of "Mother Mary," as she calls herself, but preach such a gospel to a father whose little ones are famishing, and I warrant it would be rejected with a malediction, if not with something more forcible.

To the poor poverty is a stern reality, not to be dissipated by the logic: God is good; God has no opposite, therefore evil is unreal.

Another pet theory of Mrs. Eddy's refers to the "evidence of the senses. We are told (p. 14) the senses are not to be relied on, their evidence is false, it must be reversed" (p. 60).

This ridiculous theory is based upon the fact that before astronomers discovered that the sun is the centre of the solar system, the universal belief was that the sun revolved round the earth because it appeared to do so. Mrs. Eddy recurs to this over and over again, oblivious of the fact that it was only through the evidence of the senses that the erroneous belief was corrected. The theory seems to have been invented in order to prove that a man is well "when his senses say he is sick" (p. 14). She forgets that what is sauce for the goose is sauce for the gander, and if the evidence of the senses is to be reversed, a man must be sick when his senses declare that he is in sound health. Time will not permit me to do more than give short extracts as to the teachings of Christian Science:

Anatomy.—"Man is not structural" (p. 66). "Treatises on anatomy promote sickness and disease" (p. 72). "Bones are only an appearance, a subjective state of mortal mind" (p. 421).

Physiology.—The blood, heart, lungs, brain, etc.. have nothing to do with life" (p. 45). Brain lobes cannot affect the functions of the mind" (394). "Exercise does not develop the muscles any more than it does the trip hammer"* (p. 94). "The body cannot be fatigued by toil any more than a wheel" (p. 114).

* "The trip hammer is not increased in size by exercise. Why not, since muscles are as material as wood or iron? Because mortal mind is not willing that result on the hammer!"

"It is related that a father, anxious to try an experiment, plunged his infant babe, only a few hours old, into water for several minutes, and repeated this operation daily until the child would remain *under* water twenty minutes, moving and playing like a fish." We are then gravely advised by Mrs. Eddy: "Parents should remember this, and so learn to develop their children properly *on* dry land" (p. 549).

Hygiene.—"Ignorance of hygiene is a blessing" (p. 381). "The less we know about it the better" (p. 387). "The body is to be made pure, but not by matter." It is a wonder that Mrs. Eddy does not patent the kind of spiritual soap and water she uses in her ablutions.

Philology.—"The word 'Adam' is from the Hebrew 'Adamah.' . . . Divide the word into two syllables, and it reads, a dam or obstruction. This suggests the thought of something fluid,—*of* mortal mind in solution" (p. 223).

While agreeing with Mrs. Eddy that this suggests the thought of her mortal mind being in solution, my mortal mind suggests something more pertinent, or impertinent, which, however, may not be uttered to ears polite.

Electricity.—"The lightning is fierce and the electric current swift, yet in Christian Science both are harmless" (p. 262). Yet we are told (M. W., p. 257) "Electricity strikes down the hoary saint."

Heredity.—"The offspring of heavenly-minded parents inherit more intellect and sounder constitutions, and parents may reproduce in their little ones the grosser traits of their ancestors" (p. 271). Yet, "The scientist knows that there can be no hereditary disease, no transmission of good or evil" (p. 411).

In explanation of this glaring contradiction, I would remark that Mrs. Eddy seems to have discovered that the admission of the theory of heredity was fatal to her theory that generation does not rest on any sexual basis, concerning which I shall speak at some length hereafter.

Thirst "is a matter of belief. If you think you ought to be thirsty, you are thirsty. The opposite belief would produce the opposite result" (p. 384).

Food "neither strengthens nor weakens the body" (p. 118). "It does not sustain life. It has no power to destroy life through its deficiency or excess in quantity or quality. It does not disturb the harmonious functions of mind or body" (p. 387).

I cannot refrain from taking time enough to quote a remarkable case recorded in M. W., p. 69: "In Genesis i. 26 we read, 'Let them have dominion over the fish of the sea.' I was once called to visit a sick man to whom the regular physicians had given three doses of croton oil, and had then left him to die. Upon my arrival I found him barely alive, and in terrible agony. In one hour he was well. I removed the stoppage, healed him of enteritis, and neutralized the bad effects of the poisonous oil. His physicians had failed to even move the bowels, although the wonder was, with

the means used to accomplish this result, they had not killed him. According to their diagnosis, the exciting cause of the inflammation and stoppage was eating smoked herring. Now comes the question (please bear in mind I am quoting from Mrs. Eddy), 'Had that sick man dominion over the fish in his stomach? His want of control over the fish of the sea must have been an illusion, or else the Scriptures must mistake man's power.'"

How excruciatingly comical this is. This miraculous exhibition of Mrs. Eddy's power suggests several questions:

1. May not the three doses of croton oil have had something to do with removing the "stoppage"?

2. Was the "terrible agony" a mere delusion?

3. Can smoked herring be properly described as "fish of the sea"?

4. How could the man have died if death is an illusion?

5. If Mrs. Eddy had not been providentially called *in extremis*, the man would have died, and would not the Scriptures have been proved to be incorrect as the man had not "dominion over the fish of the sea"?

6. Might not the stoppage have been caused by some other means? Mrs. Eddy has told us that "food has no power to destroy life, through its deficiency or excess, in quantity or quality," so that the "stoppage" could not have been caused by the fish of the sea—the smoked herring in his stomach. I think, therefore, we must look for the cause of "stoppage" elsewhere. Might it not have been "a dam or obstruction of mortal mind in solution?"

Notwithstanding Mrs. Eddy's assertion that food has nothing to do with sustaining life, we are not rashly to infer that she does without food, or advises her followers to do so; on the contrary, lest they should take her at her word, she warns them that "it would be foolish to venture beyond our present understanding; foolish to stop eating *until we* gain more goodness" (p. 387).

Nor must we conclude that Mrs. Eddy eats anything and everything indiscriminately. She seems to have her fair share of liking for food and other creature comforts.

In M. W., p. 230, writing about "Thanksgiving dinner," she descants with gusto upon the "mammoth turkey, the delicious pie, pudding and fruit," making one's mouth water with the description.

In the midst of her enjoyment of these illusions of her mortal mind her sympathetic soul is stirred with remembrance of the poor and she exclaims: "Willingly would I have had the table give a spiritual groan for the unfeasted ones!" When she thought of "the homes with the vacant seat," she says, "we inwardly prayed; but the memory was too much, and turning from it," to drown her sorrows, "we drank to peace, plenty and happiness in a bumper"—do not be alarmed, my teetotal friends—"in a bumper of—of—pudding sauce."

Contagion.—Mrs. Eddy's teachings upon the subject of con-

tagion are especially pernicious. According to her there is no such thing as contagion. It is the belief of mortal mind which induces disease. "Smallpox is contained and carried in mortal mind" (p. 47); "common consent is contagious and it makes disease catching (M. W., p. 228.) It is common consent which causes certain substances to be poisonous. "The vast majority of mankind believe a drug to be poisonous. The consequence is that the result is controlled by the majority of opinions outside, not by the infinitesimal minority of opinions in the sick room," (p. 70.)

This monstrous doctrine is a very convenient one to shield a Christian Science practitioner in an action for manslaughter, where he had failed to use the stomach pump, or administer an antidote in a case of poisoning.

The baneful effect of this Christian Science teaching is seen in the utter neglect of all the precautions for the separation and isolation of persons affected with such deadly diseases as diphtheria, etc.

Mrs. Eddy has, however, herself given the lie to this doctrine. For on page 257 of M. W. she has written, "Smoothing the pillow of pain may infect you with smallpox."

For ages mankind believed in the power of witchcraft—that it was possible to produce disease in the bodies of others, so that they would sicken and even die. Those who possessed the evil eye could wreck destruction upon man or beast merely through their their minds. Wherein does this old belief in witchcraft differ from Mrs. Eddy's belief? She says (pp. 411, 412): "The mind being laden with illusions about disease, health laws and death conveys mental images to childrens' bodies, and often stamps them there, making it possible, at any time, that such ills may be reproduced in the very ailments feared. *A child can have* worms, *if you say so, or any other malady.*"

A Christian Science writer, in the daily *Mail*, lately boldly enunciated the witchcraft theory by stating that disease may become outlined in the body through "*design* in the controlling mortal mind;" and Mrs. Woodbury in the *Arena* for May last states that Mrs. Eddy insisted that her husband, who (the physician who conducted the autopsy said) had died of heart disease, had been mentally killed by arsenic, mentally administered.

The teachings of Mrs. Eddy upon the subject of generation are of the greatest importance:

"An egg was never the origin of man," (p. 472.)

"The time cometh when man shall be as the angels, when the soul shall rejoice in its own and passion shall have no part," (p. 274.)

"Until it is learned that generation rests on no sexual basis let marriage continue," (p. 274.)

"Both man and woman proceed from God and are His eternal children, belonging to no lesser parent," (p. 521.)

"There is no necessity for procreation," (p. 101).

"Human knowledge inculcates that marriage is nearer right

than celibacy, while Christian Science indicates that it is not. Believing otherwise would prevent scientific demonstration," (M. W., p. 288.)

"It should be understood that Spirit, God, is the only creator, *and shuts out all other claims.*

Josephine Curtis Woodbury, in the article in the *Arena* to which I have referred, refers to this subject as follows: "To what diabolical conclusions do such deductions lead? One may well hesitate to touch this delicate topic in print, yet thus only can the immoral possibilities and the utter lack of divine inspiration in Christian Science be shown. The substance of certain instruction given by Mrs. Eddy *in private* is as follows:

"Women may become mothers by a supreme effort of their own minds, or through the influence upon them of an unholy ghost or malign spirit. Women of unquestioned integrity who have been Mrs. Eddy's students testify that she has so taught, and by this teaching families have been broken up; that thus maidens have been tempted out of their wits. Whatever her denials may be, such was Mrs. Eddy's teaching while in her college; to which she added the oracular declaration, that it lay within her power to dissolve such motherhood by a wave of her celestial rod. One result of Mrs. Eddy's interference in family life is, that Christian Science families are notably childless."

This is not the time or place to discuss theological questions, but I am quite within my proper bounds when I show how diametrically this teaching is opposed to the Scriptures, of which Mrs. Eddy's book professes to be the "key."

They tell us that "God maketh the barren woman to rejoice, and to be a joyful mother of children." That "children are the heritage of the Lord, and the fruit of the womb is his reward." The younger women are enjoined to "marry and bear children;" and it is said in Holy Scripture that "In the latter days some shall depart from the faith forbidding to marry."

Mrs. Eddy has the audacity to twist the words contained in St. Matthew's gospel, "It is not good to marry," so as to make them appear to be an injunction of Scripture. The context shows that Mrs. Eddy's application of the words is in direct contradiction to our Saviour's teaching on the subject of marriage.

Before leaving this part of my subject permit me to say a few words as to the Christianity of this so-called Christian Science mind. I am not discussing the truth of Christianity; I am, as I have the right to, enquiring whether Eddyism is Christian or not. The fundamental doctrine of Christianity is the death and resurrection of our Saviour. He himself prophesied it. Everywhere in the New Testament it is asserted. On page 212 of "Science and Health" Mrs. Eddy asserts that Jesus was merely "fainting when he was taken down from the cross;" and on page 349 it is expressly stated: "His disciples believed that Jesus was dead, while he was hidden in the sepulchre; *whereas he was alive,*

demonstrating within the narrow tomb the power of spirit to destroy human material sense." "The lonely precincts of the tomb gave Jesus a refuge from His foes, and a place to solve the great problem of being."

I am quite aware that Easter services are held in the Eddyite churches, accompanied with great display of floral decorations, and the general public would infer that these were held in commemoration of the resurrection of our Saviour from the dead, but herein is the fatal deception. Read the report of Mrs. Eddy's sermon delivered at an Easter service ("Miscellaneous Writings," pp. 177, 180), in which she applied the words "Touch me not" to herself, and you will find that it was not the rising from the dead of our Saviour which was commemorated, but, in her own words, "Of the new, living, *impersonal Christ-thought* that has been given to the world to-day (p. 178), and on page 179 we read:

"In the new religion the teaching is: 'He is not here. Truth is not in matter. He is risen. Truth has become more to us, more true, more spiritual.' We must lay aside material consciousness, and then we can perceive *truth*, and say with Mary, 'Rabboni, Master!'"

What a mockery of Easter, and all that it means to a Christian!

Do you wish to learn what Christian Science teaches about God? Listen (p. 496): "God is substance." Page 197: "God and man, including the universe, are one and eternal." Page 232: "God and man are inseparable, harmonious, and eternal." Page 199: "God without the image and likeness of himself would be a *nonentity*." *I. e.*, God without man is absolutely nothing, and, if words have any meaning, and my intellect is capable of understanding plain language, man is God.

Christian Science Healing.

Before describing Christian Science healing it is essential to tell you what it is *not*. The common idea is that it is the result of prayer to God, and faith in God. Mrs. Eddy emphatically denies this. On page 317 I read as follows: "'The prayer of faith shall save the sick,' says the Scriptures. The only beneficial effect of such prayer for the sick is on the *human mind*, making it act more powerfully on the body, through a *blind* faith in God. It is not truth itself which does this. This common custom of praying for the recovery of the sick finds help in *blind belief*, whereas, help should come from the enlightened understanding. In the *Christian Science Sentinel* of July 20th, Carl Norton, one of the shining lights of Christian Science, says: "The faith curist teaches that if enough faith is exercised God will, in direct answer to the prayer of the sick person and his friends, cure the disease. Christian Science is not faith cure. The systems are at polar extremes"

In the report in the daily evening paper at Peterboro' of June 2 last, is the report of an inquest on the body of a 4-year-old son of Mr. Beatty, living near Garden Hill, some distance from Port Hope.

For two days the poor little boy lay struggling for breath in croup. Nothing whatever was even attempted for his relief until the second day, when the deluded father drove into Port Hope, and asked one Brundreth, a tinsmith, to give his child absent treatment. Brundreth, on giving his evidence, stated that he had been studying Christian Science for years, and that his absent treatment consisted in a prayer to God, which prayer he believed God could and would answer. Surely, if Christian Scientists are not to be held responsible because their treatment is part of their religious belief, anyone pretending to treat on Christian Science principles should be held accountable when those principles are so glaringly violated.

Before describing Christian Science treatment I ask you to bear in mind two assertions of Mrs. Eddy which are of great importance. The first is found on page 492, as follows:

"There is no transference of mental suggestions from one mortal to another," and on page 96, "Miscellaneous Writings": "In healing by Christian Science it is not one mind acting upon another mind, not the transference of human images of thought to other minds."

The second I have already referred to, viz.: "The evidence of the senses is not to be relied on."

Bearing these two positive declarations in mind, I proceed to quote from "Science and Health," page 410: "Always begin your treatment by allaying the fear of your patient. *Silently* reassure the patient as to his exemption from disease and danger. Watch the result of this simple rule of Christian Science, and you will find that it alleviates the symptoms of every disease. If you succeed in wholly removing the fear, your patient is cured. Plead the case in science and for truth, *mentally* and *silently*. The silence of Christian Science is eloquent. *Argue* with the patient (*mentally, not audibly*) that he has no disease. *Mentally insist* that health is the everlasting fact, and sickness the temporal falsity. Then realize the presence of health, and the corporeal senses will respond, 'So be it.'"

This, gentlemen, is the whole of Eddypathy in every case, under all circumstances—be the patient infant or adult, conscious or unconscious, sane or insane (p. 412), imbecile or maniacal, surgical or medical, believer or unbeliever, willing or unwilling, near by or thousands of miles away, organic or functional—anything and everything, from scabies to the plague, is to be cured by thinking, at the rate of $5 a think.

There is, however, one piece of advice which Mrs. Eddy gives, which is evidently intended to prevent actions for malpractice. On page 400 she tells us that "Christian Science is always the most skilful surgeon," but, "until the advancing age admits the efficacy and supremacy of the mind, it is better to leave the adjustment of broken bones and dislocations to the fingers of a surgeon."

A few words more and I have done with this medly of folly and blasphemy.

The half-yearly communion service (whatever that may mean) of the Eddyite churches was held in this city on June 11th. At that service a message was read from Mrs. Eddy, containing this sentence: "Divine love is our only physician—*never* loses a case."

During that very week there were no less than five inquests held on the bodies of children who died under Eddypathy of diptheria, and croup; two in Chicago, two in Buffalo, and one in Port Hope.

I think you will have no hesitation in agreeing with me that when "Mother Mary" declared her treatment "Never loses a case" she uttered, well, let us call it the "Very highest attenuation of truth" of which it is possible to conceive.

The following did not form part of the address, but is a reprint from a letter published in the *Mail and Empire*.

In the preface to "Science and Health" Mrs. Eddy tells us that the revelation from God was made to her in 1866, and "was copyrighted in 1870, but did not appear in print until 1876," because she wanted to make sure that it "could be profitably published." Copyright a revelation from God! Copyright a book in the production of which she acted merely as a "scribe," and afterwards claim all the honor and profit as its "author!" Surely this ought to be sufficient to expose Mrs. Eddy's pretensions, if not, what shall he said about withholding its publication for six years, in order to find out whether it could be "profitably published?"

Having satisfied herself on this point, the next step was to take measures for its extended circulation, so, in the exercise of her prerogative as founder of her new denomination, she issued an "ordinance," as follows:—"Humbly, and as I believe, divinely directed, I hereby ordain the Bible and Science with Key to the Scriptures, to be hereafter the only pastor of the Church of Christ, Scientist, throughout our land and other lands." (M. W., p. 313.)

In this ordinance she directs that, in the public services there shall be two readers, one of whom shall read passages from the Bible, and the other such selections as may be indicated in *Christian Science* qarterly. It should be particularly noted that while the first reader reads alone from the Bible, the second reader must read responsively with the congregation, thus ensuring the possession by each one of a copy of "Science and Health." Moreover, to give prominence to the book and Mrs. Eddy, the second reader "shall commence by announcing the full title of the book, with the name of the author, and add to the announcement the Christian Science text-book."

To further ensure the sale of her book, Mrs. Eddy forbade any written extracts from it to be read to the Church. One, apparently impecunious, student was so indiscreet as to ask her, "Is it right to copy your works, and read them for public service?" (M. W., p. 299, *et seg.*)

It is amusing to read the rebuke she gave the poor fellow. "Copy my book! What right have you to do this? True, it saves you pur-

chasing my book, but have you considered that it is the property of a noted firm? Reading in the pulpit from copies of my publications gives you the clergyman's salary, and spares you the printer's bill, but does it spare you our Master's condemnation? Read copies of my book to the Church! No, sir; this method is an unseen form of injustice standing 'in a holy place.' 2. It breaks the golden rule and it encourages infringement of my copyright, and seeks again to 'cast lots for His vesture!'"

To add to the sale of her book, it was heralded as a new, divine method of healing, dispensing with materia medica and doctors, who are denounced in no unmeasured terms all through her book. Seventy pages of "Miscellaneous Writings" are filled up with reports of miraculous cures, resulting merely from the reading of "Science and Health."

Now, as to the financial results:—In the *Christian Science Sentinel* for May 25th, 1899, which must be indisputable authority, we are told: "It is estimated that nearly 200,000 copies of "Science and Health" have been distributed." The prices of the book, always "prepaid," range from $3.18 to $6. Publishers in this city have informed me that the cheapest edition could be published at 65 cents, say 68, that would leave a clear profit of $2.50 per copy. Two hundred thousand copies would yield a profit of $500,000.

For the Massachusetts Metaphysical College, "in January, 1881, Rev. Mary Baker G. Eddy obtained a charter—including the right to grant degrees" (M. W., p. 271). She was the first and only president, and the only professor. In 1889, for some cause which is not apparent,* Mrs. Eddy closed her college. In her account she says, "I withdraw from an overwhelming prosperity." (M.W., p. 273.) "There are 160 applications lying on the desk before me, for the primary class in the college. The work is more than one person can well accomplish, and the imperative call is for my exclusive teaching." Whatever the cause may have been the college was closed, but Mrs. Eddy follows up the last extract with this significant remark:—"From the scant history of Jesus and His disciples, we have no Biblical authority for a public institution. This point, however, had not impressed me when I opened my college." (M. W., p. 274.) The college is now, I believe, carried on by other persons.

* Since writing the above, the cause was disclosed by Mrs. Woodbury in the *Arena* for May last. She says it was closed "at the very period when a Massachusetts district attorney was looking for evidence of that institution's illegally conferred degrees, of which there were thousands, punishable with a fine of $500 for each offence." This has been denied by Mrs. Eddy's supporters, but the fact remains that her charter, *including* the right to grant degrees, was granted in 1881, and was repealed in 1882. Her college was carried on from 1883 until 1889 under a general statute, in which it is stated, "Any officer, agent, or servant of any corporation or association who confers, or authorizes to be conferred, any diploma or degree, shall be punished by a fine of not less than $500, and not more than $1,000." See M. W., p. 272.

The next fact to which I would especially call the attention of your readers, is that Mrs. Eddy in the ordinance to which I have already referred, positively ordains that "Teaching Christian Science shall be no question of money." Will it be believed that Mrs. Eddy was for seven years, president and sole professor in a college for teaching Christian Science, and receiving $300 from each student? I do not know how long a course lasted, but I find —(M. W., p. 270)—that the course of lectures to the primary class of 1889 extended over just seven days.

Mow, as to the financial result:—In preface to "Science and Health" Mrs. Eddy says:—During seven years some 4,000 students were taught by me in this college, which at $300 each, gives a total of $1,200,000. Of course expenses have to be deducted, but they might be large and yet yield a princely fortune.

Christian Scientists pretend to be carrying out our Saviour's directions in healing. The books have in gold letters on the front cover, "Heal the sick, raise the dead, cleanse the lepers, cast out devils," and there they stop. Not only are the words, "Freely ye have received, freely give," omitted, but Christian Scientists have the audacity to declare that our Saviour received compensation for his healing of the sick. (*Christian Scientist Sentinel*, February 16, 1899.)* Moreover, Christian Scientists practitioners are enjoined to charge, and the fees are regulated by the "Board of Education." The ground on which they are told to charge is, of course, purely a moral one. It is wrong, they say, for a person to wish to get something for nothing, and Christian Science must not sanction this wrong. Nay, more, the success of a Christian Science practitioner in curing disease depends upon his charging for his services. I copy from the *Christian Science Sentinel*. One writes:—"When I first began the healing work I rebelled against charging for it. One day I was called to see a patient who had had a doctor and nurse for several weeks, but was no better. . . . As I disliked to charge for my work, I was so much distressed that the patient received no benefit from the treatment. Then it came to me that we had been told to charge for our services. That settled it, and the patient was better at once!" Lastly, in the preface to "Miscellaneous Writings" Mrs. Eddy exults in saying:—"In the early history of Christian Science among my thousands of students, few were wealthy. Now Christian Scientists are not indigent, and their comfortable fortunes are acquired by healing mankind, mentally, physically, and spiritually." The Alpha and Omega of Christian Science is money. Who would not be a Christian Scientist practitioner?

*Repeated in *Christian Science Journal* for September, (p. 413).

TYPHOID INFECTION WITHOUT LESIONS IN THE INTESTINES; A CASE WITH REMARKS.*

BY A. McPHEDRAN, M.D., TORONTO,
Professor of Medicine, University of Toronto.

THE following case adds one more to a growing list of cases in which the bacillus of typhoid fever has been found in the organs without the intestinal glands being diseased.

R. H., aged 24, was admitted to the Toronto General Hospital, October 19th, 1898. He reported having ailed about a week. His previous history contained nothing of importance except that he had taken alcoholic stimulants to excess at irregular intervals.

On admission his temperature was 104.6° F.; pulse, 96; respiration, 24 to the minute.

He complained of weakness, headache, loss of appetite, slight nausea but no vomiting, abdominal pain and pains in the back and legs. There was no diarrhea. His countenance was heavy and dull. The tongue had a white coating in the middle, but was clean at the edges. His breath was offensive. The respiratory and circulatory systems were normal. The right side of the abdomen was fuller and more tense than the left. Absolute liver dulness extended from the sixth lower costal border to one inch below the costal margin in the right mammory line. The spleen was palpable. The urine gave a marked diazo reaction, was slightly albuminous and contained a little bile pigment. Examination of the blood showed, 4,120,000 red corpuscles per c.mm.; 10,000 white corpuscles; hema-globin, by Von Fleischl hemometer, 85 per cent. The Widal serum test was positive.

The treatment was cold baths (85° F.) and as much nourishment as he could digest.

October. 23rd.—The abdomen was somewhat distended; flanks full and dull on percussion; fluctuation determined; deep red papular rash on chest and back, many papules showing pustulation; no rash on abdomen.

November 1st.—The liver was greatly enlarged, its lower border extending down to the level of the umbilicus. The heart was weak with gallop rhythm. There was slight edema of the lungs.

November 3rd.—He was very weak. He became cyanosed during a bath and was immediately removed to bed and bathing discontinued. Ten minims of an aqueous solution of supra-renal gland extract were administered hypodermically three times a day and was followed by a marked improvement in the pulse and temperature for three days when edema of both lungs became

* Read at the meeting of the Canadian Medical Association, at Toronto, August 31st, 1899.

apparent, accompanied by increased tenderness over the liver and a friction rub showing the existence of perihepatitis. On examination of the expectoration neither tubercule bacilli nor pneumococci were found.

November 21st.—He had several rigors. A pericardial friction rub developed and a purpuric rash appeared on the lower part of the thorax and on the abdomen and legs. From this time on the serous effusions and edema increased. Death took place on November 29th.

The post mortem examination was made 14 hours after death by Dr. William Goldie. The signs of recent peritonitis, perihepatitis, perisplenitis, pleurisy and pericarditis were present, purulent lymph and dark serous fluid being found in these several situations. The intestines were congested and presented many petechial hemorrhages on the serous surface There was no loss of substance nor enlargement of Peyer's patches. The liver was greatly enlarged (weight, 102½ ounces.) It was very firm and showed a great increase of the connective tissue. The spleen weighed 4½ ounces; its capsule was thickened and the pulp was dark and very firm The mesenteric and retro-peritoneal glands were enlarged and some were very soft. The lungs showed edema and hypostatic congestion and also numerous small abscesses scattered throughout their substance.

Microcopical Examination of the Tissues: There was a unilobular cirrhosis of the liver, with strands of connective tissue penetrating many of the lobules: the connective tissue was not of embryonic type. The bile ducts were proliferated and many of them filled with leucocytes. The liver cells showed cloudy swelling. There were many areas of necrosis, in some places larger than a liver lobule, and colonies of bacilli, not staining by Gram's method, were found scattered throughout the liver in relation to these areas of necrosis. The spleen showed great engorgement and colonies of bacilli similar to those in the liver. The mesenteric glands showed infiltration with leucocytes and proliferation, and many areas of necrosis in which colonies of bacilli similar to those in the liver and spleen were found.

Bacteriological Examinations: From the spleen a bacillus, morphologically similar to the bacillus typhi abdominalis, was isolated giving the characteristic culture reaction. These bacilli clumped when tried in a hanging drop preparation with blood obtained from the patient before death, and also when tried with blood from a case of undoubted typhoid fever. A streptococcus, not pathogenic for rabits, was also obtained from the spleen. From the pleural, pericardial, perihepatic and peritoneal exudates a streptococcus was obtained which had no effect on rabbits. From the peritoneal exudates and from the liver substance the bacillus coli communis was obtained. From the lung abscesses only the bacillus pyocyaneus was obtained.

I am indebted to Dr. A. W. Tanner for making the foregoing

record of the case for me, as well as for the following tabulated statement of similar cases so far reported.

No.	Authority.	Abstract of Clinical History.	Post Mortem Conditions.
1	Kuhman— (quoted by Flexner and Harris.)	Case occurred in puerperal woman. Died in 8th week.	No intestinal lesions; mesenteric glands enlarged an necrotic; spleen enlarged. Bacillus typhi abdominalis isolated from mesenteric glands.
2	Banti— *Rifor ma Medica* Ottobre, 1887.	Ordinary typhoid symptoms. Death 28th day.	No intestinal lesions; spleen and mesenteric glands enlarged. A bacillus morphologically similar to bacillus typhi abdominalis obtained from the spleen.
3	Vaillard— *Soc. des Hop. de Paris*, March, 1890.	Typhoid with severe nervous manifestations and constipation. Death 3rd day.	No intestinal lesions; congestion of lungs; congestion of meninges. Bacillus typhi abdominalis obtained from spleen, lungs and spinal cord.
4, 5, 6	Karlinski— *Wein. Med. Woch.*, 1891, No. 11.	Three cases. Clinically typhoid. Occurred during an epidemic.	No intestinal lesions; spleen and mesenteric glands enlarged. Bacillus typhi abdominalis isolated from the spleen in all cases.
7	Vincent— *Le Bulletin Medical*, 1891.	Characteristic case with purpuric rash and coma.	No intestinal lesions; spleen and mesenteric glands not enlarged; both lungs congested. Bacillus typhi abdominalis obtained from spleen lungs and heart's blood.
8	Guarnieri— *Riv. gen. ital. di Clin. Med.*, 1892.	Characteristic symptoms.	No intestinal lesions; spleen and mesenteric glands enlarged. Bacillus typhi abdominalis obtained from spleen, liver and biliary passages.
9	Du Cazal— *Soc. des Hop. de Paris*, 1893.	Characteristic symptoms.	No intestinal lesions; mesenteric glands and spleen not enlarged. Bacillus typhi abdominalis obtained from the spleen.
10	Beatty— *Dublin Journal of Medical Sciences*, February, 1897.	Case presented pyrexia, jaundice and hematuria. Death 6th day. Beatty also reports a similar case without autopsy.	No intestinal lesions; spleen and mesenteric glands enlarged. Bacillus typhi abdominalis obtained from spleen.
11	Cheadle— *Lancet*, London, July 31st, 1897.	Boy 3 years of age; characteristic symptoms with constipation; Widal's serum test positive; bacillus typhi abdominalis obtained from the urine on 26th day. Death in 4th week.	No intestinal lesions; spleen not enlarged: mesenteric glands enlarged; liver enlarged. Bacillus typhi abdominalis obtained from spleen.
12	Flexner and Harris, *Johns Hopkins Bulletin*, December, 1897.	Man aged 68 years. Shortness of breath and symptoms of pleurisy. Death 2nd day after admission.	No intestinal lesions; thrombosis of main branch of pulmonary artery supplying lower lobe of right lung; gangreen of right lung; perforation of the pleura; pyopneumothorax; spleen enlarged; cloudy swelling of liver and kidneys. Bacillus typhi abdominalis obtained from lung, liver. kidneys and spleen.
13	Chiari and Kraus, *Zeitschrift f. Heilkunde*, 1897.	Report of 7 cases occuring. 19 autopsies. Each of the 19 cases gave a positive serum test before death.	The seven cases presented no intestinal lesions. In three of the cases the bacillus typhi abdominalis was obtained post mortem from the organs.
14	Pick, *Wilner Klin. Woch.* 1897.	Characteristic symptoms; positive serum test. Death in 4th week.	No intestinal lesions; spleen not enlarged; broncho-pneumonia of left lung; mesenteric glands enlarged. Bacillus typhi abdominalis obtained from the gall bladder and mesenteric glands; not obtained from the spleen.
15	Mennier— *Soc. des Hop. de Paris*, 1897.	Case in a boy suffering from miliary tuberculosis; rose spots appeared shortly after admission; Widal's serum test positive.	Tuberculous ulcers of intestine, but no typhoid ulcers. Bacillus typhi abdominalis obtained from spleen lungs and pleural exudates.
16	Nicholls and Keenan, *Montreal Medical Journal*, January, 1898.	Characteristic symptoms with constipation and positive serum test. Death 6th week.	No intestinal lesions; broncho-pneumonia; spleen and mesenteric glands enlarged. Bacillus typhi abdominalis obtained from the spleen.

No.	Authority.	Abstract of Clinical History.	Post Mortem Condition.
17	Lartigan—*Johns Hopkins Bulletin*, April, 1899.	Characteristic symptoms with constipation and delirium. Death 3rd week.	No intestinal lesions: edema and congestion of both lungs; pleurisy; enlargement of spleen, liver and mesenteric glands; areas of necrosis in the liver; cloudy swelling of the kidneys. Bacillus typhi abdominalis obtained from the heart's blood, lungs, liver, gall bladder, and spleen.
18	Bryant, *British Med. Jour.* April, 1899.	Case in a boy 1 year and 9 months of age; severe diarrhea and vomiting; pyrexia; res; pirations greatly increased broncho-pneumonia; Widal's serum test positive. Death 5th week. A sister also had typhoid fever.	No intestinal lesions; pleurisy; areas of consolidation and small abscesses scattered throughout the lungs; spleen and mesenteric glands enlarged, the glands were very soft. Bacillus typhi abdominalis obtained from mesenteric glands.
19	Lartigan—*New York Medical Journal*, July 29th, 1899. Reports two cases, the second being open to objection on account of a possible typhoid infection four months previous to observation and the consequent possibility of the persistence of the typhoid bacilli from that time.	Case I.—Man aged 51 years. Characteristic symptoms with constipation. The day before death convulsions and rigors followed by dilatation of the pupils and retraction of the head.	No intestinal lesions; chronic interstitial nephritis; broncho-pneumonia and edema of lungs; chronic adhesive pleurisy; spleen slightly enlarged; mesenteric glands not enlarged. Bacillus typhi abdominalis obtained from the liver, gall bladder, kidney and urine. Bacillus pyocyaneus was obtained from broncho-pneumonic patches.
		Case II.—Came under observation for ectopic gestation for which an operation was performed followed by death on the 4th day. History of possible typhoid fever four months previously.	No intestinal lesions; spleen greatly enlarged and adherent to omentum by old bands; liver enlarged; gall bladder distended; mesenteric glands not enlarged; cloudy swelling of kidneys; enclometritis. Bacillus typhi abdominalis obtained from the liver, gall bladder, kidneys and uterus. Streptococcus pyogenes obtained from the uterus. Pneumococcus obtained from the hearts blood.

These cases are of great interest as they show the possibility and the probable frequency of infection without lesion of the intestinal glands. Of course the frequency of such infection can only be determined by a long series of *post mortem* examinations in which careful bacteriological examinations are made of all the organs. It remains to be determined, also, whether there is general infection in typhoid fever before anatomic changes are demonstrable in the intestinal glands. These cases also indicate the irrational basis on which the purgative and *miscalled* eliminative treatment rests.

HOW TO DEAL WITH THE CONSUMPTIVE POOR.*

BY E. J. BARRICK, M.D., OF TORONTO.

I beg to submit the following as among the more important means of dealing with the consumptive poor, including the providing of the necessary funds therefor:

1. The establishment and maintenance of a rural sanatorium in connection with each municipality or group of municipalities for the reception of such cases as admit of a reasonable hope of cure or improvement.

* Read before the Canadian Medical Association, August 30th, 1899.

2. The erection and maintenance in connection with the above sanatorium of a suitable isolated building for the reception and treatment of such advanced cases of the disease as are unsuitable for sanatoria treatment, and until such provision is adequate to utilize so far as practicable the various existing hospitals for that purpose, and would urge upon the authorities of such institutions the absolute necessity of adopting such means of isolation as may be approved of by the Provincial and Local Boards of Health.

3. The co-operation of the Dominion Parliament, Local Legislatures, municipalities, philanthropic and charitable organizations and individuals in providing the necessary funds therefor.

4. And further, that the following plan of co-operation is worthy of careful consideration :

(*a*) The adoption of regulations by the Dominion Parliament and Local Legislatures for supplementing grants approved of by by-law submitted to the qualified ratepayers for the purchase of land and erection of buildings.

(*b*) A per diem allowance by the Dominion Parliament, Provincial Legislature, and Municipal Council, supplemented by philanthropy and charity by subscriptions, donations, bequests, legacies, etc., for the maintenance thereof, and that such rural sanatoria should be under the control and management of a large committee of citizens, acting in conjunction with the Local Board of Health.

The subject of tuberculosis at the present time is undoubtedly one of the most important questions that can engage the attention of any government, legislature, municipal council, association or individual ; and to whom are the eyes of the world turning to-day for light and guidance, but to the medical practitioners, who in their daily rounds are brought face to face not only with this disease in its various stages, but also with the distress and poverty that are its natural consequences. Could there be then a more fitting place for its discussion than the thirty-second annual meeting of this National Association of medical men ?

I hope, therefore, Mr. President, that this paper will receive at the hands of this meeting the consideration that the subject deserves, and that you will bear with me while I endeavor as briefly as possible to state some of the more important reasons in support of the propositions I have here laid down.

You will observe that I have left the broader domain of the subject and confined myself strictly to one phase, which I believe is of the utmost importance in checking the spread of tuberculosis and lessening the mortality therefrom, namely, the isolation and treatment of the consumptive poor and the providing the necessary funds therefor.

The subject has been dealt with somewhat exhaustively from a scientific and clinical standpoint, and the concensus of opinion is that the disease is contagious, preventable, and curable, especially in the earlier stages.

Sanatoria have been built in various parts of the world, and the

medical and public opinion in both Great Britain and America is, that whether viewed from a preventative or curative standpoint, the sanatoria treatment of tuberculosis has produced the best results.

But while sanatoria provision has been made for the reception and treatment of those who are able and willing to pay, so far the doors have been closed against the poor. While the mortality of the disease falls most heavily upon the artisan, the wage-earner, and especially upon the poor, where the conditions and surroundings are more favorable to the spread of the disease, it is a deplorable fact that no sanatorium door is to-day open to the consumptive poor. The object of this paper is to open a door.

I need not dwell upon the first two propositions setting forth the desirability of rural sanatoria, of isolation in existing hospitals, as these, when viewed from a scientific and clinical standpoint, like the axioms and postulates of Euclid, are self-evident, not only to medical men, but to every thinking person, and therefore require no discussion, argument, or demonstration.

But while we should ever keep before us the scientific and clinical aspect of this question, and it is perhaps more strictly within the province of this Association to confine its deliberations to that side, yet if any progress is expected to be made in a more rational way of dealing with the consumptive poor, public opinion must be directed to the practical, financial, and economical side; and this is the object of the third proposition, to which I shall devote the time yet allotted to me.

The third proposition calls for the co-operation of the Dominion Parliament, Provincial Legislatures, municipalities, philanthropic and charitable organizations and individuals, for the purpose of providing the necessary funds.

I shall note first some of the excuses offered why none of these four sources of help have done anything towards the end here sought.

The first cry is one of regret—"no power"; second, one of poverty—"no money"; third, one of repudiation—"none of our business"; and fourth, one of discouragement—"no use trying."

It is claimed that the Dominion Parliament has "no power," the British North America Act having delegated that power to the provinces. It was, however, gratifying to read in the daily press a few weeks ago of the stand that was taken in the Dominion House by Dr. Roddick, Sir Charles Tupper, Dr. Sproule, and others, that notwithstanding the above fact, they thought the question was of national importance, and that the Dominion Parliament should take action.

It is claimed that the provinces, having a fixed income and an increasing demand from the existing charities, have "no money" for rural sanatoria.

It is claimed by prominent municipal politicians, and I have

heard them say, "it is none of our business; it is a national question, and should be dealt with by the Government."

It is said by philanthropic and charitable people that there is "no use trying to cope with a question of such magnitude unless the other three sources mentioned co-operate."

Thus we have reproduced day after day and year after year by these four sources of help the old, old story of the Priest and the Levite, with this exception, that so far no good Samaritan has come to the relief and opened one sanatorium door for one poor consumptive.

Now, Mr. President, at the close of this nineteenth century, when million dollar funds are being raised by the churches, and the spirit of combination, amalgamation, and trusts seem to be floating in the air, is there no power that can be brought to bear upon these four sources of help to bring about the co-operation asked for in the third proposition?

There is one power, and I believe only one, that can bring it about—it is the power of public opinion. Every parliament, every legislature, every municipal council, every organization and association of every kind, and every individual has power and can assist in producing the necessary public opinion. As the mighty power of Niagara is only the united power of the tiny rain drops that fall from the clouds, so the mighty power of public opinion is only the united opinions of the individuals that make up the nation.

I hope, therefore, we have heard the last of the "no power" cry, and that all will unite to bring about the co-operation so much needed in the interest of the consumptive poor.

I shall now give a few reasons why each of the four sources mentioned should contribute and also co-operate.

Why the Dominion Government Should Contribute.

It goes without saying that the Dominion Government represents the nation. A nation may have ever so valuable assets in its forests, in its fisheries, in its mines, in its broad acres of fertile land, etc., but the most valuable asset a nation can have is its people; and this is eminently true of a nation like this Canada of ours, with its unparalleled natural resources awaiting development. The cry of the nation is "people, more people!" And successive governments have expended large amounts of money, and given large grants of mineral and fertile lands to induce people to come and live within our borders and assist in developing these rich resources.

Now statistics tell us that of all people who die between the ages of 15 and 60, no less than 37 out of every 100 die of tuberculosis—37 out of every 100 die at an age when their lives are of the most value to the nation, to the municipality, and to the home—37 out of every 100 die of a disease that is preventable and curable.

Now I submit that one of our people is at least of as much

value to the nation as one immigrant, and I am sure that public opinion that approves of the expenditure to secure the latter will also endorse the granting of a moderate amount of money towards the isolation and treatment of our consumptive poor, and thus check the spread of the disease and save and prolong the lives of our people.

Again, a large proportion of the national revenue is obtained from a tariff duty. It is a pretty well established fact that the consumer pays the duty, therefore it is not unreasonable that a portion of the revenue thus contributed by the people should be returned and used to protect the people from the spread of tuberculosis. Again, a considerable amount of revenue is derived from the liquor traffic. Now everyone will admit that the excessive use of intoxicating liquor lowers the vitality of the system, produces poverty, and thus predisposes the victim to the development of tuberculosis; is it unreasonable then to ask that a portion of the revenue thus obtained be applied to the care of the consumptive poor?

Why the Province Should Aid.

The provinces should aid in the first place because they have the power which was delegated to them by the British North America Act, and secondly, because they have the money. There was a time, perhaps, when the provinces might justly claim that their income was fixed, and the growing demands of the existing charities left no money for the isolation and treatment of the consumptive poor. However, in recent years a new source of revenue has been created by legislation, and a large amount is now received from the succession tax. It is claimed that the imposition of this tax has diverted from charities large amounts in the form of bequests, legacies, etc., which formerly went to such organizations. Is it not reasonable, then, that some of the income derived from the estates of the rich should be used in caring for the poor who are suffering from tuberculosis?

Again, by more recent legislation in Ontario, monetary institutions, rich corporations, and trusts have been removed from the domain of the municipal tax-gatherer and used for revenue purposes by the province. Some municipalities that have been large contributors to charitable institutions have suffered considerable financial loss by this change, and their ability to contribute correspondingly lessened. Surely, with such rich sources of revenue at hand, no excuse can be offered why a province should not contribute towards rural sanatoria.

Why the Municipality Should Contribute.

There is no one who knows better than the municipal taxpayer himself that his burden is great, and that it will probably be greater, especially in those municipalities where the loss is great

from the removal from the assessment roll of the above-mentioned wealthy monetary institutions, corporations, and trusts; we will therefore have to approach the taxpayer from the financial standpoint, and show him that the policy he is pursuing toward tuberculosis is a penny wise and pound foolish one. What would you say of a man who is complaining of the great expense he is put to each year in repairing the damage done to decorations, carpets, and furniture caused by a leaky roof? You would say, "You foolish man, why do you not repair the leaky roof? Why not apply the ounce of prevention rather than pay the pound of cure, as you are doing?" This is the short-sighted policy pursued to-day by the taxpayer in reference to the consumptive poor. He does nothing to check the spread of the disease and lessen the mortality therefrom, but goes on each year paying thousands of dollars to relieve the distress and poverty it produces.

In Germany, where compulsory life insurance is in force, and where all in receipt of a wage below a certain amount are obliged to insure, sanatoria for the treatment of tuberculosis have been established and maintained largely by the insurance companies, where they send their insured for treatment with a view to prolonging their lives, and thus postponing the day of paying the death claim. So successful has this undertaking been purely from a financial standpoint that the number of such sanatoria has increased each year, that, while in 1895 there were only two of such institutions, there are at the present time in Germany over sixty.

I submit that this experiment of sanatoria treatment of tuberculosis in Germany demonstrates beyond doubt that from a financial standpoint it would be cheaper and more economical for the taxpayer to contribute towards the erection and maintenance of rural sanatoria for the reception and treatment of the consumptive poor, and thus do something towards preventing the spread of the disease and lessen the distress and poverty for which he is now spending so much money every year.

Why the Philanthropic and Charitable Should Contribute.

There is no disease that so strongly appeals to one's sympathy and charity as tuberculosis among the poor, especially when we see the breadwinner stricken down, and the life ebbing away in crowded, unsanitary, and ill-ventilated dwellings, with nothing in the surroundings to give half a chance for life, and everything to facilitate the spread of the germs of disease to others in whom the poverty and surroundings have helped to produce the nidus for the rapid development of the disease.

I am sure that when a clear, well-defined and workable plan is presented wherein the the three other mentioned sources would cooperate, a liberal response would be forthcoming from the charitably-disposed in contributions, donations, legacies, and bequests. No greater inducement could be given, and no more potent argument

could be advanced than the willingness of the Dominion Parliament, Provincial Legislatures, and municipalities to co-operate in this important work.

Some may object to the plan because they think it is new, and has never been tried in any part of the world. This may be true, and if it is true, I see no reason why a young, vigorous nation like this Canada of ours should not have something new. Name it if you like the "Canadian Rational Plan" for dealing with the consumptive poor, and I care not whether you call it old or new so long as it accomplishes the end in view. However, whether the plan is new or not, the co-operative principle that underlies it is not new. It is now being applied in a somewhat modified form in our public schools, technical schools, and houses of refuge for the poor; and to illustrate the effect of grants by the Government and qualified ratepayers upon the charitably-disposed, I refer you to what has taken place in the county of Ontario during the present month. John Cowan, and his brother, W. F. Cowan, of Oshawa, offered grants, the former $5,000 in cash, and the latter forty-five acres of land, provided that a by-law for $12,000 is approved of by the qualified ratepayers of the county. To secure this and also the Government grant of $4,000, a by-law was submitted for the above amount on August 21st, and carried by a large majority. This makes, I am told, the twentieth county in this province where such Houses of Refuge have been established.

Now I maintain that every argument that can be used in support of such Houses of Refuge for the poor can with greater force be used in support of the co-operative plan proposed in this proposition for the establishment of rural sanatoria for the consumptive poor. In other words, if the poor who are well require a House of Refuge how much more do the poor who are ill with tuberculosis need a rural sanatorium?

If the Dominion and Local Governments would adopt regulations for supplementing grants by by-law approved by the qualified ratepayers, similar to what is now done by the Province of Ontario in connection with Houses of Refuge for the poor, and also a per diem allowance for maintenance, I believe there would be a liberal response from the charitably-disposed, and that a by-law would be submitted and carried at the first January elections in the new century in at least one municipality, and by this time next year a rural sanatorium for the consumptive poor would be an accomplished fact.

I submit that from the facts, arguments, and reasons presented, it is clearly the duty of the Dominion Parliament, Provincial Legislatures, municipalities, and philanthropic and charitable organizations and individuals, not only to contribute towards the support of rural sanatoria for the consumptive poor, but also to co-operate in this important work, as by so doing a greater number of needy ones can be reached, a greater check be given to the spread of the disease, and a great number of valuable lives be saved to the home and to the nation.

I shall conclude with a word or two in reference to the last suggestion, namely, that such rural sanatorium should be under the control and management of a large committee of citizens, each of whom should bring the work in touch with some particular interest or phase of modern civilization, working in conjunction with the local Board of Health. At present I shall offer only two reasons in its support.

1. Public opinion is not and will not for some years be ripe for notification and compulsory isolation in tuberculosis as is now enforced by the Boards of Health in cases of small-pox, diphtheria, and scarlet fever. Much will therefore have to be done by means of educating the public, so that the poor who are suffering from this disease will voluntarily take advantage of the rural sanatorium, not only for their own benefit, but also in consideration of the safety from contagion that such a course would afford their family and the public at large, who have provided this free home for their care and treatment. These large committees of citizens would, no doubt, be an important factor in this educating process.

2. There is no philanthropic work, if properly handled, that will bring a more liberal response from the charitably-disposed than a clearly, well-defined, practical, rational, co-operative plan for dealing with the consumptive poor; and there is no more simple and practical way of encouraging this plan than by placing the control and management under a large committee of charitably-disposed people who are willing to contribute of their means and time to this most important and necessary work.

I do not pretend that the plan I have imperfectly outlined is anything like perfect, and my object in presenting it is merely to bring the subject before the Association, and ask that a strong representative committee be appointed to bring in a report on the question at the annual meeting in 1900, and trust that the discussion on said report will form one of the prominent features of next year's meeting.

On motion of Dr. Barrick the following were appointed a committee to report at the annual meeting in 1900 on "The best means of dealing with the consumptive poor, including the providing of the necessary funds therefor":

J. G. Adami, M.A., M.D., Montreal, Prof. Pathology McGill University; P. H. Bryce, M.A., M.D., L.R.C.P. and S. Edin., Secretary Provincial Board of Health, Ont.; E. J. Barrick, M.D., M.R.C.S. Eng., L.R.C.P. Lond., Toronto, member of the Medical Council, Ont.; H. H. Chown, B.A., M.D., Winnipeg; H. A. Lefleur, B.A., M.D., Montreal, Ass. Prof. of Medicine McGill University; J. Lafferty, M.D., Calgary, N.W.T.; W. Oldwright, M.A., M.D., Toronto, Prof. Hygiene, Toronto University; R. W. Powell, M.D., C.M., Ottawa, President Elect. Can. Med. Ass.; J. A. Williams, M.D., M.R.C.S. Eng., L.R.C.P. Lond., Ingersoll, ex-President Medical Council Ont.

FIBRINOUS RHINITIS.*

BY D. J. GIBB WISHART, M.D., TORONTO, ONT.,
Professor of Laryngology and Rhinology, Trinity Medical College ; Surgeon, Nose and Throat Department, Toronto General Hospital, St. Michael's Hospital, and Victoria Hospital for Sick Children.

THE occurrence during last summer and fall of a series of cases, which apparently were fair examples of what has been described as fibrinous rhinitis, and certainly were the first to fall under my own notice, and a desire thereby to add a little, if possible, to the small amount of knowledge we possess upon this interesting subject leads me to present this paper.

Fibrinous Rhinitis is an affection described under a variety of names, such as Membranous Rhinitis, Croupous Rhinitis, Pseudo-Membranous Rhinitis, Streptococcic Rhinitis, Laminated Fibrino-Plastic Rhinitis, and by Bretonneau, and other writers in France as Coryza Couenneux. It was mentioned about twenty-six years ago by Henoch. The best description of the disease that I can find in the most recent text-books is that contained in Walsham's[1] "Nasal Obstruction." It is as follows: "The nasal cavities are obstructed by false membranes of a grayish-white color and fibrinous consistency, adhering to the swollen and reddened mucous membrane, especially that covering the septum and turbinal bones. The false membrane adheres more or less firmly, and leaves a bleeding surface when forcibly removed, or it may come away easily without bleeding. Cocaine does not cause a shrinking of the swelling. No membrane is discovered in the fauces, the glands in the neck are not enlarged, and no constitutional symptoms are present. The patient is most likely a child. It usually begins, without apparent cause, as ordinary cold in the head, and may be ushered in by headache and slight fever, which, however, quickly subside. The urine is not albuminous, and the disease abates in a couple of weeks, and is not followed by paralysis."

The last extensive paper on this subject in American and Canadian literature is that of Ravenel[2], of Philadelphia, published in 1895, wherein he collects reports of seventy-seven cases. As a result of these observations, Ravenel drew the conclusion that, "patients suffering from fibrinous rhinitis were always a possible source of contagion, and should be isolated as carefully as those affected with the more common types of diphtheria."

I find, however, that such eminent authorities as Bosworth in America, and Lennox Browne and Walsham in England express themselves in their recent publications to the effect, that fibrinous rhinitis is a benign disease distinct from diphtheria. It is true that Bosworth states that all these cases should be isolated, but where is the need of isolation, with all that is implied thereby, if the disease

*Read before the Ontario Medical Association, Toronto, June, 1899.

be benign? Bosworth[3] states that "croupous or fibrinous rhinitis is characterized by a deposit of fibrinous exudation, which is superimposed upon the epithelial layer, and does not involve the deeper tissues. The disease, undoubtedly, is frequently caused by, or follows operations in the nose, as after the galvano cautery. In children the exudate forms a soft, thick, almost granular mass, very friable, which, in most cases, can almost be wiped from the mucous membrane in small fragments. The treatment appropriate to diphtheritic cases is most often used with benefit in these cases. The patient should be isolated at once."

Walsham[4] says "Fibrinous rhinitis is rare. The affection is sporadic, and not contagious. In bacteriological examinations, the Klebs-Loeffler bacillus is not found, but the staphylococcus pyogenes aureus, or a staphylococcus resembling this organism may be present. By some observers fibrinous rhinitis is believed to be merely a mild form of nasal diphtheria, since in some supposed cases of the affection, the Klebs-Loeffler bacillus has been discovered in the membrane. It is possible that these particular cases were mild forms of nasal diphtheria, fibrinous rhinitis being a benign disease distinct from diphtheria."

Lennox Browne[5] says, "Recognizing there is such a disease as diphtherial rhinitis, there is also a form of nasal inflammation characterized by exudation of membrane which, although probably bacterial in its nature, holds a subsidiary position in pathology analogous to that of non-bacillary membrane laryngitis. Risk of contagion is remote. Cultivation and inoculation experiments give negative results. The neighboring glands are not involved, and no one has found the Klebs-Loeffler bacillus."

On the other hand, Haviland Hall,[6] in Albutt's "System of Medicine," says, "In the majority of cases the disease is the result of diphtheritic infection, and in some the general symptoms are so slight that the true nature of the disease is likely to be overlooked. It is only after a careful bacteriological investigation with a negative result, that the possibility of any cause other than diphtheria should be admitted, and until such examination is made the patient should be isolated. In the non-diphtheritic cases have been found a coccus resembling the staphylococcus pyogenes aureus, but differing from it by its extraordinarily quick growth, and by the duration of its power of infection. The streptococcus aureus and the pneumococcus membranous rhinitis occasionally occurs in the newborn infant, usually in connection with septicemia in the mother."

Here, then, we have very opposite views expressed by leading authorities upon a subject of great importance, namely, the contagiousness of one form of a disease which is looked upon with dread by physician and community.

All of the cases which I here record occurred within a period of about fourteen months, and must be considered, in my opinion, simply as cases of diphtheria, where the type was of an unusually mild character. These cases are as follows:

Case 1. On July 17th, 1898, M. W., aged 6, complained of stuffiness of the left nostril in the evening, but was quite well and slept soundly, and was not examined till the day following.

The left nasal chamber was then found completely filled, from front to back, with a grayish-white fibrinous semi-transparent membrane. It was removed entire by injecting cocaine beneath it, and by the use of a probe. The membrane was attached to the septum anteriorly, and to the inferior, and, perhaps, to the middle turbinated bones, as far back as the posterior nares, and when removed left a slightly bleeding surface. The throat showed no signs of membrane, except two faint white lines behind the right posterior faucial pillar. The pulse was 76, and the temperature normal. After the removal of the membrane, finely powered iodoform was dusted on to the surface. The membrane was examined the same day by Professor Anderson, who found numerous polynuclear leucocytes with fibrini, but no bacteria. Cultures were also made which showed abundance of staphylococcus albus, but nothing else.

The membrane did not re-form to any appreciable extent, and did not invade other parts. Iodoform was blown in daily, the child was not isolated, and was not ill in any way, and the nose was healed in about a week.

M. E. W., aged 5, sister of No. 1, was examined accidentally on the evening of the 29th of July, 1898, twelve days following the above, and a membrane was observed on the posterior wall of the pharynx, which was examined also by Professor Anderson. Culture proved this to contain Klebs-Loeffler bacilli. She was isolated, and antitoxin promptly administered. The glands were slightly enlarged, and there was a slight extension of the membrane. Recovery ensued within a week. No paralysis followed, but the anemia was very marked. The nose was not involved. Neither of these children were exposed to contagion in any known way, and no other members of the family were affected.

Case 2. August 25th, 1898, H. W., aged 9, was brought to the office by her mother, who stated that she was not sick, but that she complained of some stuffiness of the nose, which she thought might be a return of adenoids, for which an operation had been performed in May. On inquiry it was found that she had had a sore throat about ten days earlier, which had been pronounced by a physician non-diphtheritic, and from which she had quite recovered. The one side of the nose was found completely blocked with a membrane similar to that described in No 1. Removal left a bleeding surface. The child was promptly referred to the Isolation Hospital, and the Klebs-Loeffler bacilli were found. The membrane spread out to the pharynx. Recovery ensued, but over six weeks passed before the bacilli disappeared.

Case 3. In the early part of 1898, M., an infant a few days of age, was referred to me by Dr. McMahon. The child was found to have difficulty in nursing, as its nose seemed to be blocked. On examination I found one side of the nose filled by a fibrinous

membrane. The membrane was examined at the health office, and the Klebs-Loeffler bacillus found. There was an extension of the membrane, and no other symptoms of diphtheria were observed.

CASE 4. H. R., boy, aged 5, in the practice of Dr. Fotheringham, developed a choked nose in November, 1898. The nasal chamber was completely occluded by a whitish membrane. The Klebs-Loeffler bacillus was found in abundance. The membrane remained present for fourteen days, and the bacillus was found on each of several examinations. There was no clinical evidence of diphtheria at any time, and there was no extension of the membrane. The remaining residents of the house, father, mother and maid, each developed typical pharyngeal diphtheria with all the clinical symptoms, the maid's case being of a severe type, with faucial paralysis, and a peripheral neuritis of the anterior tibialis following.

The following cases occurred in my practice in the Hospital for Sick Children:

CASE 5. F. J., aged 9, was operated upon in September, 1898, for deflected septum. On the fourth day thereafter one nostril was occluded by a fibrinous membrane. Bacteriological examination showed the presence of staphylococci and the Klebs-Loeffler bacillus. The child was isolated for nine days, and there was no extension of the membrane, and no delay in the healing of the wound.

CASE 6. W. R. C., aged 4, was admitted in February, 1898, for anemia and epistaxis. The child proved to be a hemophylic. Some months after admission, both nostrils were found to contain a fibrinous membrane which, on removal, left a bleeding surface. This membrane recurred persistently, and its presence was attended by attacks of epistaxis. Repeated bacteriological examinations were made, but no Klebs-Loeffler bacilli were ever found. The child was not isolated, the membrane was removed, and various powders, styptic and antiseptic, were applied. The membrane finally disappeared, and the child was discharged in the following September.

CASE 7. H. P., boy, aged 10, entered the hospital for Bell's paralysis on December 30th, 1898. On the 27th of January his nose was observed to be sore and bleeding, and high up in the right chamber a whitish membrane was discovered. This was found to contain staphylococci only. No other symptoms were observed, and the patient was discharged on the 9th of February.

As will be seen, these seven cases give examples of a benign membrane in two cases, and of a membrane containing Klebs-Loeffler bacilli in five cases. Again in two cases, one of them with a benign membrane, there is a clear history of the infection of those brought into contact with the patient. The appearance of the membrane varied, being grayish and viscid in No. 1 and white and somewhat friable in No. 6. In no case could the membrane be removed without leaving some slight bleeding point, and in no case, except in No. 6, was the bleeding very marked. In Case No. 1 the membrane was the most typical that I ever saw, and careful exam-

ination proved nothing to be present but staphylococcus, and yet the only child with which she was brought into contact developed pharyngeal diphtheria. In Case No. 3, which was examined by a very accurate observer, the membrane was typical, constitutional symptoms were absent, and yet the patient spread true diphtheria to three persons. Of the hospital cases, only one was isolated; diphtheria, however, was epidemic in the hospital in the summer of 1898, and an occasional case appeared in the wards throughout the winter, the greatest watchfulness being required to prevent an outbreak. These two cases, therefore, would appear to have suffered from fibrinous rhinitis owing to their exposure to diphtheritic contagion. I have already presented the views of our leading authorities, and now present as full a list as I have been able to obtain of cases recorded since 1895, of which there are ninety-one, making, with my own, a total of ninety-eight cases.

F. J. Dixon [7] reports two cases, in one of which cultures showed micrococcus albus liquefaciens and bacillus termo of Vignal, but no others.

Hennig [8] reports eighteen cases which were fairly typical, and, after a careful comparison, concludes that fibrinous rhinitis is not a disease *sui generis*, but is intimately related in a clinical and pathologico-anatomical manner to diphtheria; that its etiology is obscure, but that it is not due to Klebs-Loeffler bacillus.

H. Lambert Lack [9] reports thirty-six cases, forming 2½ per cent. of all the children attending his hospital practice. The results of bacteriological examinations carried out in thirty-three cases showed the true Klebs-Loeffler bacillus constantly present, generally in pure culture, sometimes mixed with pyogenic cocci, etc. It was usually of the large variety, and its identity was proved by its morphology, by its growth in various culture media, etc. It was shown to be of full virulence in animals, to produce virulent toxins, and to be neutralised by antitoxins, to live for several months in culture media, and by its vigorous growth to crowd out other organisms if present. A thorough examination proved a previous history of diphtheria in connection with one case only. The disease gave rise to itself in nine cases in four families, and often to mild sore throat, twenty-five cases out of eleven families.

John Middlemas Hunt [10] reports three cases presenting the clinical characters of fibrinous rhinitis, but all of them so related to diphtheria as to make him thoroughly distrust any case based on clinical evidence alone. In two of these there was a bleeding surface left after removal of the membrane. In two cases true pharyngeal diphtheria occurred among those associated with the patient, and the other case developed a severe attack of diphtheria two weeks later, followed by extensive paralysis. The Klebs-Loeffler bacillus was found in the only case submitted to bacteriological examination.

Richard Lake [11] reports one case with a white gelatinous mass filling entirely the cleft between the septum and the inferior

turbinate bone. Bacteriologically no organisms but staphylococcus pyogenes aureus were found. The case was lost sight of before a cure was affected.

Price Brown[12] reports one case with a large white patch of cartilage-like membrane filling the whole cavity, and adherent to the septum. It had been noticed by the patient for about two weeks. On removal it left a more or less abraded surface. There were no indications of diphtheria. The membrane was made up of fibrin and leucocytes. No bacteriological examination was made.

Meyer[13] reports twenty-two cases in which he had made bacteriological examinations with inoculation experiments, and found in nine cases streptococci only, and in thirteen others the Klebs-Loeffler bacillus in virulent form. In their clinical course the cases with diphtheria bacilli showed no difference from those without.

Gerber[14] reports seven cases where virulent diphtheria bacilli were found. In other cases, the number not being given, streptococci, staphylococci, diplococci, etc., were found without the Klebs-Loeffler bacillus. Gerber considers that the clinical pictures may be identical while the diseases are different, and that the difference between this and true diphtheria is one of degree only, dependent upon the vulnerability of the mucous membrane.

Gerber and Podack[15] report five cases of primary fibrinous rhinitis in which the virulent Klebs-Loeffler bacillus were present. They emphasize the great danger of infection in these cases on account of the relatively slight symptoms, and the chronic course, and insist on strict isolation.

Pluder[16] reports six cases of fibrinosa diphtherica of which five were examined bacteriologically. Klebs-Loeffler bacilli were found in all, while in one case there occurred extension to the pharynx, pharyngeal diphtheria, and more or less severe diphtheritic sore throat in persons in contact with the patient. He considers that but for the fact that there is no known case of fibrinous rhinitis which has been followed by paralysis, the diseases might be considered as identical.

In these series of cases we have the Klebs-Loeffler bacillus present in sixty-nine out of a total of ninety-eight cases. These are not the observations of one man but of a number, and most of the cases bear the ear-marks of careful observation. Looked at from the point of view of these results, are not the conclusions of Ravenel, in 1895, amply borne out? The cases of fibrinous rhinitis are rare, and the general practitioner who meets with a case will look up the subject in one of the recognized authorities, and, acting upon their conclusions, will be apt to leave the case without isolation. This is too dangerous for the community, and not justified by what we now know of the disease.

With regard to the frequency with which this form of disease appears, I feel convinced that the observations of Potter and Lambert Lack are not borne out in the experience of others. In my own case, in an experience of six years in charge of an Intern and

Extern Nose and Throat Clinic in the Hospital for Sick Children, not one case of fibrinous rhinitis was observed till those recorded appeared. This long experience without a case, and then the sudden appearance of a comparatively large number, only goes to prove in my own mind that fibrinous rhinitis is but one of the forms or phases of diphtheria, due to an attenuation of the bacillus. It is assumed by some observers that the membrane which is now and then found in the nose after operative procedures is identical with that found in fibrinous rhinitis. To this I would demur. The appearance is not at all the same. The history of the case in itself is a guide if the physician has occasion to suspect the nature of the deposit present. I have in many instances observed this membrane-like eschar after the galvano cautery.

It would appear that observers of this interesting disease thus fall readily into three classes:

1. Those who consider diphtheria and fibrinous rhinitis to be distinct diseases.

2. Those who consider there is but one disease, but that the degree of contagiousness varies, so that we may safely neglect to isolate such cases where no clinical and bacteriological evidences of diphtheria are to be found.

3. Those who would isolate every case.

In view of the fact that cases possessing a membrane bacteriologically innocent have apparently communicated diphtheria to others, are we not warranted in thinking that the Klebs-Loeffler bacilli were really present somewhere? If so, we are forbidden thereby to abandon the isolation of these cases until a series of bacteriological examinations have been made, which practically means until the disease itself has disappeared.

In conclusion we may fairly consider that the accumulated evidence proves the following points:

1. Fibrinous rhinitis and diphtheria are not distinct diseases.

2. All cases of fibrinous rhinitis need the same precautions as to isolation that diphtheria requires.

NOTE.—Subsequent to the presentation of this paper the writer has received a copy of "Non-Diphtheritic Pseudo-Membranous Rhinitis," by Dr. Price Brown, in which the conclusions reached are diametrically opposed to those of this paper.

BIBLIOGRAPHY.—1. Walsham, "Nasal Obstruction," 1898. 2. Ravenel, *Medical News*, May 13th, 1893. 3. Bosworth, "Diseases of the Nose and Throat," 1897. 4. Walsham, "Nasal Obstruction," 1898. 5. Lennox Browne, "Diseases of the Throat and Nose," 1899. 6. Albutt, "System of Medicine," 1898. 7. F. J. Dixon, *Annals Otol., Laryngol. and Rhinol.* 8. Hennig, *Wien. med. Wochenschr.*, vol. 47, pages 1605 to 1610. 9. H. Lambert Lack, "Fibrinous or Membranous Rhinitis and Its Relation to Diphtheria," *British Medical Journal*, October, 1898. 10. J. Middlemas Hunt, "On the Relation of Fibrinous Rhinitis to Diphtheria, *British Medical Journal*, October 22nd, 1898. 11. Richard Lake, *Laryngoscope*, September, 1898. 12. Price Brown, *Dominion Medical Monthly*, April, 1898. 13. Meyer, "Bacteriological Condition in Rhinitis Fibrinosa," *Archiv. of Laryngol.*, vol. 4, No. 3. 14. Gerber, *Monat. f. Ohrenheilkunde*, July, 1898. 15. Gerber and Podack, *Deut. Archiv. f. klin. Med.*, Band 54, 1895. 16. Pluder, *Deut. med. Wochens.*, 44 and 46, 1896.

47 Grosvenor Street.

RESULTS ALREADY ACHIEVED AT THE MUSKOKA COTTAGE SANATORIUM.*

BY J. H. ELLIOTT, M.B. (TOR.), GRAVENHURST,
Medical Superintendent.

In view of the general interest at present evinced by the profession in the prophylaxis and treatment of tuberculosis, I have thought that a communication in reference to the Sanatorium in Gravenhurst would not prove uninteresting to this Association. The Sanatorium has been built by the National Sanatorium Association, which was founded with an object of establishing public institutions for the treatment of pulmonary disease.

The officers of the Association are: Lord Strathcona and Mount Royal, President; Sir William Ralph Meredith, Vice-President; W. J. Gage, Esq., Treasurer; N. A. Powell, Esq., M.D., Secretary. It is in no sense of the term a commercial speculation. There is no capital stock subscribed, and no dividends to be paid. It is intended to be in every respect a public national undertaking. The Association hopes to secure, through public and private appeal, sufficient endowment to make at least one-half the beds free. As soon as this is accomplished the intention is to establish similar institutions elsewhere. Already about $70,000 has been expended on buildings, land, improvements, electric light plant, water supply, etc. There is now accommodation for fifty patients, and every room is occupied, while many are waiting for admission.

Through the munificence of W. J. Gage, and the late Hart A. Massey, who each gave $25,000 towards the undertaking, the trustees were enabled about two years ago to open the administration building for the accommodation of patients. Since then five cottages have been completed through the gifts of Wm. Christie, Esq., Wm. Davies, Esq., and family, and Mrs. T. H. Bull, of Toronto, Mrs. E. Jackson Sandford, of Hamilton, and the bequest of Mrs. Jesse Maver, of Pickering. Three of these cottages are for four patients each, one for six, and one for ten. The bedrooms open into a large sitting-room, in which is an open fireplace. Each cottage has a spacious veranda, so arranged as to afford shelter from the winds in winter and still allow the patients the free benefit of the sunshine.

In the administration building are the dining-room, kitchen, billiard, reading, and music room, secretary's office, consultation room, dispensary, and laboratory. There are also three solaria, one facing east, one south-east, and one south-west. A broad piazza, with balcony above, stretches along the whole front of the building. The patients' rooms, twenty-two in number, are principally on the first floor. All the buildings have hardwood floors. The walls and ceilings are of cement plaster, which allows of washing. There are no sharp angles to allow accumulation of dust. All corners, both

* Read before the Canadian Medical Association, 1889.

of woodwork and walls, are rounded. The windows are large, to admit plenty of light and fresh air. The rooms are large and airy, with unusually high ceilings. They are heated by steam or hot water, and lighted by electricity.

Each patient has his own room. The furnishings of each bedroom consist of an iron bedstead, with hair mattress, a dresser, washstand, wardrobe, one small table, one chair and one rocker. In addition are two small rugs, one beside the bed, the other at the washstand. Carpets or curtains are not allowed.

The Sanatorium has been built and equipped for the treatment of the earlier forms of the disease. With the cottage system it has been possible to admit a few of the more advanced cases from time to time, but it has been found advisable to keep these classes separate, the advanced cases needing that special care and attention which the earlier cases do not require.

Especial care is taken in the disposal of the sputa. Patients are strictly forbidden to expectorate outside the cuspidors or paper handkerchiefs provided, either on the grounds of the Sanatorium or elsewhere. The cuspidors in use for the collection of sputa are the spitting cups supplied by Seabury & Johnson, made of waterproof paper, so folded as not to spill the contents should they be accidentally overturned. These are carried in a special holder, made after the pattern of the one supplied by the above firm, but which I have modified by putting on a solid bottom, converting it into a watertight box, so that should any of the papers be imperfect, or should there be leakage from any other cause, there will be no contamination of any object on which the box may be placed, as there must be in the original which possesses only a bar across the bottom. As often as necessary these are renewed, the patient removing the paper containing the sputum, wrapping it securely in paper and tying with twine. This is then deposited in a receptacle capable of holding the day's collection; from this they are removed daily and cremated. While walking these boxes are found rather inconvenient for patients who have but little expectoration. In their place the patient carries a supply of Japanese-paper handkerchiefs. They are cautioned after once using a handkerchief never to open it to use a second time, but always to use another. These are disposed of in the same way as the boxes, by wrapping securely in paper and burning. When a patient leaves, the room and its contents are exposed to the action of formaldehyde vapor before being again occupied. The window shades are not allowed down during the day to obstruct the entrance of sunlight. Except when dressing, the shades are kept completely rolled up.

In my classification of cases I have followed Trudeau, employing the terms: incipient, advanced, and far advanced. 1. Incipient.—Cases in which both the physical and rational signs point to but slight local and constitutional involvement. 2. Advanced—Cases in which the localized disease process is either extensive or in an advanced stage, or where with a comparatively slight amount of pulmonary involvement the rational signs point to grave constitu-

tional impairment, or to some complication. 3. Far advanced—Cases in which both the rational and physical signs warrant the term. On discharge, the cases are classified under the terms: apparently cured, disease arrested, improved, stationary, failed, or died. 1. Apparently cured—Cases in which the rational signs of phthisis and the bacilli in the expectoration have been absent for at least three months, or who have no expectoration at all; any abnormal physical signs remaining being interpreted as indicative of a healed lesion. 2. Disease arrested—Cases in which cough, expectoration and bacilli are still present, but in which all constitutional disturbance has disappeared for some time; the physical signs being interpreted as indicative of a retrogressive or arrested process. 3. Improved—Cases in which there has been some marked gain in the condition of the lungs, or in which there has been marked amelioration of the constitutional disturbances; cases with simply a slight gain in weight are not placed under this term.

I take the following figures from the first year's report:—

Number of patients treated during the year	116
Number at Sanatorium under treatment, September 30th, 1898	33
Number to be reported on	83

Of these 83 patients there were:

Discharged apparently cured	12
" with disease arrested	23
" with marked improvement	29
" unimproved	11
" failed	5
Died	3

Of the 83 patients, 64, or 77%, gained in weight an average of $11\frac{1}{3}$ lbs.
Average stay of each patient, 98 days.

Class I.

53 patients remaining under 3 months. Average stay, 7 weeks.

Condition on Admission.		*Condition when Discharged.*	
Incipient disease	18	Apparently cured	8
Advanced	20	Disease arrested	12
Far advanced	15	Much improved	21
		No change	6
		Failed	4
		Dead	2

Number of patients who gained in weight	42
" " " lost " "	4
" " " neither gained nor lost	7
Average gain	$9\frac{1}{4}$ lbs.
" loss	$4\frac{1}{4}$ "

Class II.

30 patients remaining 3 to 9 months. Average stay, 5 months 15 days.

Condition on Admission.		*Condition when Discharged.*	
Incipient disease	6	Apparently cured	4
Advanced	16	Disease arrested	11
Far advanced	8	Much improved	7
		No change	6
		Failed	1
		Dead	1

Number of patients who gained in weight	22
" " " lost " "	4
" " " neither gained nor lost	4
Average gain	16 lbs.
" loss	4½ "
Maximum gain for one month	15 "
" " two successive months	25¼ "
" " three successive months	34 "
And one patient in four months gained	41½ "

These results were obtained while the Sanatorium was undergoing rapid development, and with a class of cases not the most desirable for building favorable statistics, and with an average stay of less than one hundred days.

Our year ending September 30th, I am unable to present a full report for the present year, but have prepared a statement regarding the seventy-two cases discharged during the first nine months of the year up to June 30th, 1899:

Condition of Patient on Admission.	Apparently cured.	Disease arrested.	Much improved.	Stationary.	Failed.	Died.	Total.
Incipient cases	11	4	2				17
Advanced	3	20	2	5	1		31
Far advanced	1	4	6	5	5		21
With doubtful evidence of phthisis.	2		1				3
	17	28	11	10	6		72

Average stay, 152 days.
Of the 72 cases, 61 had bacilli on admission.
47 " " discharge.

14 (23%) lost bacilli under treatment; *i.e.*, a total of 25 patients, or 35% of those treated, had no bacilli on discharge.
Of the 72, 60, *i.e.*, 83% gained in weight, the average gain being 11½ lbs.
The maximum gain for one month was 18 lbs.
The maximum total gain was 43 lbs.

In comparing these results with those of the first year a satisfactory improvement is noted. That while the advanced cases far outnumber the incipient cases, and the proportion is practically the same as last year, we see that with the average stay increased from 98 days to 152 days, the percentage of apparent cures has also increased from 15 per cent. to 23 per cent. I would like to draw especial attention to the fact that of the 17 incipient cases 11, or 65 per cent., were apparently cured. With a longer stay there is every reason to believe the percentage of incipient cases cured would be 80 per cent. or over.

It is early yet to speak of permanent results, but there is every reason to hope that those apparently cured will have no recurrence of their trouble if they take reasonable care after leaving. From 12 to 18 months have now elapsed since the discharge of the patients of the first year. Twelve were reported apparently cured. In none of these has there been a return of cough, and all are in perfect health. Of the 23 with disease arrested, 1 cannot be traced, 1 is now in an advanced condition, 2 who returned to city life against advice have since died, the remaining 19 are at work and quite as well as on discharge. Of a number who gave promise of speedy cure had they been enabled to remain, several have progressed favorably since discharge, and now report the cough entirely gone.

That tuberculosis is one of the most curable of chronic diseases, when brought under this treatment sufficiently early, is clearly proven. As soon as diagnosis is made the physician must urge upon his patient the necessity for prompt action. Do not tell the patient his lungs are weak; tell him frankly what his trouble is, so that he will understand the need of proper care of himself, how to avoid self-infection, and to avoid infecting others, and tell him also his prospects of recovery are of the best if he will follow your advice, while if he is careless the termination will necessarily be fatal.

If it is desirable for the patient to go away from home, be sure that he goes to a locality where he can have proper medical supervision. Without this he is very apt to be injudicious, and do many things detrimental to his progress. Symptoms may change, hence any instructions given before leaving may in a short time be contra-indicated. And here may I enter a protest against the sending far from home of patients far advanced in pulmonary trouble, and in whom there is little chance of improvement. The utter uselessness of this, the separation of the sick one from kind friends at home, the weariness and fatigue of the journey, and the realization of the hopelessness of his case soon after arrival, combine to make a sad picture which should be avoided.

It is impossible within the limits of this paper to deal with the treatment employed. It is, broadly speaking, that generally carried out in special sanatoria: rest when pyrexia is present, regulated exercise in apyretic case, suitable diet and hygiene, and fresh air 24 hours in the day; medicines are exhibited only as indications call for; perhaps the most important factors in the treatment being the constant supervision of the patient's daily life, which cannot be secured in private practice, and the special facilities provided for out-of-door life in all seasons and in all weathers.

"The Country Doctor."—By special request from more than one source, and knowing that our readers have in the past appreciated our efforts to adorn *the representetive medical journal of Canada*, we reproduce in this issue, on special coated plate paper (for framing if desired), "The Country Doctor," the original of of which, in oil, has become so famous.

Proceedings of Societies.

THE THIRTY-SECOND ANNUAL MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

THE thirty-second annual meeting of the Canadian Medical Association convened on August 30th, 1899, at Toronto, in the amphitheatre of the Educational Department in the Normal School buildings, the use of which was courteously tendered to the Association by the Minister of Education, the Hon. G. W. Ross. A wealth of intertwined Stars and Stripes, while here and there Old Glory, gave a welcome to the visitors from across the line, made bright patches of color and showed in relief the marble busts—the ghostly images of those once famed in song and story—that adorn its walls. The very place to sit at the feet of Gamaliel. The exhibit hall (connected with the Association) occupied a well-lighted room at the rear and upstairs in the same building, and was well patronized by the physicians. To the President and the genial and energetic Secretary it must have been a gratification to see, as early as nine o'clock, upon the opening morning, members beginning to wend their way to the meeting place, and when the opening hour came, the assistant secretary's desk had a goodly number around it, waiting to register their names and pay their fees. Especially pleasing to the Toronto physicians it must have been to see so many from Montreal and the East, not to mention those from the West, as last year's meeting was held in Quebec with its many local attractions and points of historical interest; and yet the newer, busier city this year drew even a larger number. But surely the book is more than the cover, and so not wholly to locality, be it ever so interesting, need we ascribe the magnetism that draws the numbers, but tender the praise to the devotion of the student to his Mæstro, the worship of the devotee at the intellectual shrine of his science god, the great Æsculapius.

Promptly at the hour announced the President, Mr. Irving Cameron, called the meeting to order in a few well chosen words. His presidential address, however, was not delivered until two o'clock of the opening day. The secretary's chair was once again occupied by the popular Dr. F. N. G. Starr. In the next few pages we present a condensed report of the proceedings. The first paper read was entitled:

Tuberculosis in Canadian Cattle and its Prevention.—DR. GEORGE J. ADAMI, of Montreal, presented a very creditable paper

upon this subject. We will not give more than a few of the points to which the reader drew attention, as we will present the paper in full in our next issue of the JOURNAL. Dr. Adami concreted his subject by asking three questions: (1) Is tuberculosis in cattle a source of danger to other cattle, so as to seriously effect their well-being, and be a source of loss to their owners? (2) If infectious from animal to animal, is it infectious from animal to man and consequently a source of danger to the human race? (3) If infectious from animal to man, what are the commonest modes of infection and how can the danger be lessened? The answer to the first question was a decided affirmative, the instance of an infected bull being introduced into a herd of healthy cattle and the consequent appearance of the disease in some of the cattle. However, Canadian cattle were shown by the comparison of statistics in a very favorable light. In 1894, at Montreal, ninety thousand cattle were inspected, and out of that large number only sixty were rejected, and of the sixty only two were infected by tuberculosis. Dr. Adami dwelt on the importance of detaining all cattle imported for breeding purposes in quarantine for seven weeks, and then if they failed to react to the tuberculin test, they might be released and given to their owners. In answer to the second question, he found it difficult to secure reliable information. The danger at present was not very formidable owing to the comparative freedom from the disease shown by the Canadian cattle. As lately as 1894, in the abattoirs at Montreal, Halifax, and St. John, N.B., over two thousand five hundred animals had their lungs examined, and only fourteen showed signs of tuberculosis, a remarkable showing, indeed. An interested audience has assembled to listen to the paper on:

Christian Science.—DR. J. H. RICHARDSON, Toronto. The grand old man was, as ever, able, and in this instance more than willing to fire the guns of his genius and knock down the straw nine-pins which he culled from "Science and Health," the product, in the text-book line, of the brain of the much-married lady-apostle of this cult, Madame Eddy. Dr. Richardson's grim humor caused many a hearty laugh. His paper will be found in this number of the JOURNAL.

What Has Been Done at the Muskoka Cottage Sanatorium for Consumptives.—Dr. J. H. ELLIOTT, the medical superintendent, gave a detailed description of the inception, progress, and results, achieved at this institution. His paper dealt largely in statistics, giving classification, and figures, and proved interesting in its conciseness. We present this paper in full in this issue of the JOURNAL.

The President's Address.—Mr. IRVING H. CAMERON, Toronto, rose to the occasion. His scholarly address was worthy of the man, and his chaste English and well-finished sentences a genuine pleasure to listen to in this age of rapid transit and abbreviation. This address we present to our readers in full on another page of this issue. We list briefly the many interesting papers read:

An Experience in Formaldehyde Disinfection.—Dr. F. MONTIZAMBERT, director-general of public health, of Ottawa, gave the history of an outbreak of small-pox on board the *Lake Huron* steamship, twenty-six days out from port on the Black Sea, with twenty-four hundred Doukhobors on board. All of the passengers were landed on June 9th, the vessel was disinfected by the 13th, and a new crew put in by 4 p.m. on the 14th. A solution of formaldehyde was employed, and twelve ounces of this was allowed for each one thousand cubic feet of space. Two and a half months had since elapsed, and there had not been reported a single case of the disease occurring among the passengers. Dr. Montizambert's paper will appear in this JOURNAL later.

Massage and the Relief of Eye Strain in the Treatment of Glaucoma.—Dr. GEORGE M. GOULD, of Philadelphia, Pa. Our readers may look forward to Dr. Gould's paper appearing in next month's issue, it having been handed to this JOURNAL by the writer himself for exclusive publication in Canada. Dr. Gould said that usually all cases of glaucoma first came under the notice of the general practitioner. Four years ago he wrote concerning glaucoma that massage properly applied seemed to exert a beneficial action in stimulating and arousing normal functions generally. He illustrated this plan of treatment by citing several cases in which it had been employed with beneficial effect, and concluded by describing his method of operation. It was to be done with the soft parts of thumbs and the tips of the fingers. In this way all venous and lymph spaces were cleared and broken.

Treatment of Acute Digestive Disorders of Infancy.—Dr. A. R. GORDON, of Toronto, gave a description of the different gastro-intestinal disorders, and then dwelt more fully on the treatment and management of these cases. If the attack was a simple one, the suspension of all food for from eight to twenty-four hours might be all that was necessary; water might be allowed for thirst. After this period was past, rice water and such like fluids might be permitted. Liquid peptonoids he had found very satisfactory in those of more serious aspect. It was necessary to persist in this diet for days, until all symptoms had disappeared, and the child was perfectly convalescent. Cow's milk should be the very last article of diet to be allowed. Calomel with sodium bicarbonate should be early administered until the characteristic bile stools are seen, and even for some time thereafter the bowels should be watched, and phosphate of soda or aromatic syrup of ginger employed to keep them in condition. In cases which become exceedingly chronic, paregoric in suitable doses may be employed.

Dr. HOLMES, of Chatham, Ont., spoke of the advantages of hydrotherapy in these cases.

Dr. A. L. BENEDICT, of Buffalo, discountenanced opium and astringents, and said he had found catnip tea a valuable sedative to be employed. Dr. Gordon's paper will also appear in a later issue.

A Case of Subcutaneous Emphysema. Dr. Fred. Fenton, of Toronto, reported this case, which occurred in a child of six and one-half months old. The child had been described to the doctor as being perfectly well up to five months, except a slight attack of bronchitis about the third month. On December 23rd last, five days before death, the baby was restless, but did not cough much, in fact cough was not a marked feature at any time. Swelling was noticed in the greater part of the neck, chest, and shoulders, passing upward over the head and face, and also downward over the chest and abdomen. It was limited to the neck behind, and as low as Pouparts ligaments over the abdomen. A *post-mortem* was made six hours after death. The point of entrance of the air into the pleural sac could not be discovered. The spleen was large and grayish, tubercles were scattered over its surface; the liver was also large. There was no gas formation in any of the internal organs. Examination under the microscope of the tissues showed tubercle bacilli in the lungs, a few in the liver and spleen, but none in the kidneys. The father, fifty years old, had suffered from a cough in winter for years, owing to chronic bronchitis. No direct signs of tuberculosis were apparent in the mother, but she was frail and looked a fit subject for the disease.

Successful Treatment of Three Important Cases by the Combined Form of Treatment.—Dr. G. H. Burnham, Toronto, gave the histories of three cases and his plan of treatment for specific iritis. Pilocarpine was applied hypodermically, from gr. $\frac{1}{40}$ to $\frac{1}{4}$, in a series of sittings, consisting of from ten to fourteen injections. An interval was then allowed to elapse of from three to eight weeks, during which time the patient was taking internally the bichloride and the iodide of potash. Then another sitting was repeated. Before each injection the patient was made comfortable in a room at a temperature of 75° F., and lay either on the left or right side, as convenient. In winter a hot water bottle was applied to the feet. The proper effect of the injections was shown by prespiration and a free flow of saliva; the latter varying from six ounces to a pint. At the end of an hour the patient arose, dressed and went home. Two hours after he could partake of food. The doctor generally gave the injection about two hours after the midday meal. In some cases a few months' treatment would suffice, in others it had to be continued for three or four years. Relapses had not occurred under this treatment.

The Best Method of Dealing with the Consumptive Poor.—Dr E. J. Barrick, Toronto. The writer grouped his method under three headings: First, the establishment and maintenance of rural sanatoria in connection with each municipality; secondly, the erection and maintenance, in connection with the sanatoria, of suitable buildings for the reception and treatment of incurable cases of the disease; third, the co-operation of the Dominion Government, provincial legislatures, etc,, also, of course, philanthropists in providing the necessary funds. We publish Dr. Barrick's paper in full in this month's number.

A Skin Clinic at St. Michael's Hospital was fairly well attended; about thirty cases were shown, among them several rare cases, such as dermatitis herpetiformis, larva migrans, urticaria pigmentosa, hydrocystoma, hydradenitis, favus, molluscum contagissum, exfoliative dermatitis following psoriasis. Drs. A. R. Robinson, of New York; Shepherd, of Montreal; A. MacPhedran, and Graham-Chambers, of Toronto, took part in the discussions that followed.

SECOND DAY.

On Thursday, August 31st, the second day of the meeting, a great many papers were read, among others. *Erysipelas, with Treatment by Marmoreks Serum,* by Dr. A. De MARTIGNY, of Montreal. During a little over a year past the doctor had treated several cases of erysipelas of the face with Marmoreks serum with good results. He described one rather obstinate case in which tonic and general treatment had been employed for five days without any appreciable result. The temperature, which had been 105° F. with pulse rate 148. On the next morning after the injection of the serum (20 C.C.) became normal, with pulse 96. Next day the pulse also became normal, and in five days the patient was at work again. The previous treatment had been a 30 per cent. solution of ichthyol as an application, with iron and quinine internally. In addition to the injection, a solution of bichloride, 1 in 4000, was used externally. Several other cases were cited, and stress was laid upon the beneficial results the antitoxin exerted in preventing relapses. Dr. Powell asked concerning the method of injection, and if 20 C.C. was the usual amount employed.

Dr. CAMERON endorsed Dr. Martigny's treatment from his own experience with several cases of his own; in one case seven attacks or recurrences of the disease had occurred in fourteen months, but since trying the treatment in question no relapse had recurred in that particular case.

Sir JAMES GRANT, of Ottawa, said that thirty-two years ago, when the Canadian Medical Association was organized, this subject was not even in its infancy. Now great advances have been made, and he hoped Dr. De Martigny would prosecute his researches still further in this direction. In 1860 Sir James received a severe blood-poisoning, and was near the point of death. In 1863 he was induced to try the influence of the serum of ordinary vaccine injected into his system. He also spoke of the treatment at that time of skin diseases by the same method, particularly psoriasis, confirming the fact that serum therapy was then in vogue.

Dr. IRWIN, of Weston, also gave instances of treatment with Marmoreks serum, in one case with an unhappy result.

Dr. DE MARTIGNY, in answering the objections, stated that 10 C.C. might be sufficient in a given case, providing the serum

were taken from the same family of streptococci as represented in the disease, but as this was not always known, 20 C.C. was the amount best to be administered. He requested the members of the Association to give this treatment a fair trial during the next year, and report their results next year at Ottawa.

Complications and Treatment of Fracture of the Skull, by Dr. J. M. ELDER, of Montreal. The writer stated that his paper referred to fractures at the base of the skull. During the summer he had seven cases of these injuries in the Montreal General Hospital, five at the same time, and fortunately the entire number ended in recovery. He was impressed by the good results of the routine treatment; he believed that often general practitioners considered this form of injury treatment quite unjustifiable, as it would be in a compound fracture of the tibia, for instance. The history of the first case cited was as follows: A young girl, aged eight, was rendered unconscious as the result of a fall of fifteen feet, striking on the head. There was a large hematoma about the parietal bone and a depressed fracture above the left ear; the pupils were widely dilated; blood was oozing from the nose and ears. Bright red blood in small quantities was vomited, which, on examination with the mirror, was found to be originally dripping from the vault of the pharynx. Something had to be done at once. The left common carotid artery was immediately tied, the injury being on the left side; the patient regained consciousness on the third day, and the temperature kept fairly good. On the twelfth day she developed thromboses in different sinuses, but she fully recovered, and left the hospital perfectly well, after a period of twenty-six days' habitation. She continued well, and was in perfect health at the present time. The histories of the other cases were given, after which Dr. Elder detailed the routine treatment to be followed. Absolute rest in bed and quiet, and attention to the mouth, nose, and ears were enjoined.

Dr. LETT, of Guelph, Ont., brought up the question of mental trouble following these injuries, and whether any symptoms of this nature followed the act of tying the carotids.

Dr. SHEPHERD, of Montreal, said that he had tied the carotid many years ago for an injury of this character. In his case, there was a gradual loss of consciousness after the accident, and then he had operated and had found a large clot at the base of the skull. The hemorrhage was so profuse that he tied the common carotid immediately. There were no mental symptoms afterward in this case.

Dr. ELDER stated he had assisted Dr. Shepherd in operating on that case, and had but recently heard that that patient had become insane, which fact Dr. Shepherd, however, took occasion to deny. He was watching this case carefully to see if any such symptoms did supervene.

Dr. ATHERTON, of St. John, N.B., stated that he had seen the carotid artery tied in the case of a medical man of St. John, and no

mental symptoms followed; and if any of the members should hear him speak on a medical or political topic, he would perceive that his mental faculties were all right.

Dr. BELL, of Montreal, thought that certainly many cases could be relieved by prompt interference. Little could be done to avert the mental symptons which were the direct result of the traumatism; but patients should not be let die of hemorrhage. The great point was to know when to interfere, and to interfere promptly.

Observations on Adenoids and Enlarged Tonsils and Their Removal.—Dr. D. J. GIBB WISHART, of Toronto, in a four years' service at the Hospital for Sick Children, gave the results from 1896 to 1899 of a total of 103 operations, 47 being boys and 56 girls. Twenty-four per cent. were under five years of age, twenty-four per cent. were over ten years, and fifty-two per cent. were between five and ten years. Some of these were examined years after operations. In only sixteen cases could an examination be obtained, and only four of these showed any return of the disease. Five of the patients had been previously operated on by other surgeons. Two deaths occurred, both from the anæsthetic. In forty-seven per cent. of the cases there were enlarged tonsils. Dr. Wishart spoke of the diagnosis of adenoids, and said that the facial expression was most helpful. The nose was flattened and broadened between the eyes. In discussing the employment of anæsthetics in these operations, he favored chloroform, nitrous oxide gas being too evanescent in its effects to prove beneficial. Ether at times could be advantageously substituted for chloroform. Tonsillotomy was too frequently performed.

SIR WILLIAM HINGSTON had rather that Dr. Wishart had confined himself to one or the other topic because remarks on one did not apply to the other. It occurred to him that when these adenoids were present an operation should take place as soon as possible. There was nothing to be gained by waiting. When he came, however, to the tonsils, that was a very different thing. He thought many operated there altogether too frequently. He had seen whole families of children with enlarged tonsils, and when they grew older the tonsils came down to their normal condition. He had seen the tonsils almost meeting, and yet had hesitated to remove them. He also took exception to the use of the spray in the nasal cavities, as the membrane of the nose was unaccustomed to it. For years he had not used water medicated in any way for use in the nose. He preferred to get there by the proper application of powders.

Tuberculosis and Insurance.—DR. JOHN HUNTER, of Toronto, contributed a paper on this subject and which we will publish in full in another issue of the JOURNAL. He spoke of giving applicants for life insurance the advantages of progressive medicine and of the modern thought of the day. It was the imperative duty for examining physicians to be honest for their employers. It was the duty of the physician to furnish the medical director with a

full, accurate, and honest report in all cases. The aim of this paper was to invite discussion, that might be used to define more clearly "the position of examining physicians" with reference to the relationship between tuberculosis and insurance. He spoke of the causative and predisposing factors of tuberculosis, viz., environment, physical condition, and hereditary tendency. Of the latter so much stress was not now laid on heredity as formerly; the disease was infectious just as scarlet fever was infectious, only with a longer incubation period. He quoted Dr. Bryce as saying that about eighty per cent. of deaths from tuberculosis occurred among working classes or individuals working at trades.

Sir James Grant, of Ottawa, entered a strong plea for the establishment of a great national society such as that instituted by Sir William Broadbent in England, over a year ago, for the spread of information among the people with regard to this disease and the means necessary to be adopted to stay its ravages.

Cyst of Broad Ligament.—Dr. Charles Smith, of Orangeville, Ont., related his experience with a case of this kind. He described fully the operation he had performed, and noted the difficulties encountered in its completion. The tumor was removed through an incision five inches in length, and the patient subsequently enjoyed the best of health for five years, when she succumbed to an attack of apoplexy.

Implantation of the Ureters in the Rectum in a Case of Exstrophy of the Bladder, with Patient.—Dr. George A. Peters, of Toronto, presented the patient, a little boy aged four and one-half years, who, after the description of the operation, was most thoroughly examined by the surgeons present. In addition to the exstrophy, the patient had also procidentia recti. These conditions were very loathsome, and disgusting to friends and should be submitted to operative procedure for relief. Two years ago Dr. Peters operated on this child for the relief of the rectal condition with very marked and beneficial results. The exstrophy had been removed altogether. The operation was performed extraperitoneally and the ureters were conducted one on either side into the rectum. Almost immediately after the operation, the rectum manifested a tolerance for the urinary secretion. The child could now go from two to three hours without anything passing from his bowels; at night he could go from four to five hours. Dr. Peters stated there was danger of death in these cases after operation, from an ascending pyelo-nephritis. In animals on which this operation had been performed, this was the manner of their death.

Co-Operation of Surgeon and Physician in Abdominal Cases.—Dr. A. L. Benedict, of Buffalo, chose this as the subject of his paper, and pleaded for the co-operation of the medical and surgical attendants upon abdominal cases of tumors and cancers in which both were required in their treatment. He was of the opinion that very often the patient would progress more quickly and efficiently if the case after operation was handed over again to the medical

attendant. He proceeded to instance a number of cases in support of his contention, as cancer of the cardia, etc., and asserted a diagnosis should not be made at the time of the operation.

Sir William Hingston said the diagnosis should not be made at the time of the operation, but that by a process of exclusion it could generally be arrived at satisfactorily. Dr. Benedict has given this paper for publication and it will appear next month.

Gall-Bladder Surgery.—Dr. J. F. W. Ross showed a number of gall stones which he had removed in operations; also a mucous fistula in a specimen of the gall bladder. He described the surgical operations of the gall bladder, stating the difficulty he generally had in extracting these stones from the common bile duct. He exhibited an instrument he had devised for this purpose which he had manufactured in England, with which now he could overcome his former difficulty.

Dr. Holmes, of Chatham, Ont., stated that when the gall bladder was enlarged and the abdominal walls were thin, the operation for the removal of these stones became a comparatively easy one. He illustrated on the blackboard how he extracted the stones from the common bile duct without any difficulty.

Address in Surgery.—Dr. W. B. Coley, of New York, delivered a magnificent address on "The Radical Cure of Hernia." It was a scholarly effort. He traced the inception and progress of the operation from the earliest times, mentioning the names and dates of those who had helped in improving or perfecting the operation. He discussed the operation as performed at the present day and noted the rapid progress brought about within the last decade, apportioning to Macewen, Bassini, Kocher, Halsted, and others, the respective honor that should be allotted to these gentlemen. Then a description of their operations was given, and with a reference to femoral and umbilical hernia he concluded his subject.

THIRD DAY.

Anæsthesia by Chloroform and Ether.—Dr. W. B. Jones, of Rochester, described this subject in detail. We have this paper at present in type and will publish next issue, Dr. Jones having kindly handed it to us for publication. The anæsthetist he advised to give his whole attention to the work in hand and take notice of nothing pertaining to the operation. He should be a thorough master of the subject and should countenance no interference on the part of the operator. The preparation of the patient for an operation was thoroughly explained and the physical condition referred to. Referring to the heart, he said it was not so much heart murmurs that one had to fear as it was a degenerated state of muscular fibre. The capacity of the chest should be understood, and the total quantity of solids excreted in the twenty-four hours, by the secre-

tion of the kidneys, should be known. Attention was then given to the quantity of the anæsthetic, from eight to twelve drops per minute being sufficient to keep the patient anæsthetized. Everything should be close at hand, so that in the presence of an emergency or pending dissolution, prompt service could be rendered. In conclusion, he said the anæsthetist should have a knowledge of the operation and the length of time it should take to perform it.

Some Observations on the Treatment of Cancer.—Dr. A. R. Robinson, of New York, gave his ideas concerning the epithelioмata, and illustrated by means of a diagrammatic drawing the cases of cancer in which the knife was indicated. He considered that in those cancers in which one could not cut down deeply, as on the scalp and around the nose, an arsenious acid paste was preferable. The composition of this paste should be equal parts of arsenious acid and gum acacia of the consistency of butter. It should be applied and left on from sixteen to eighteen hours to get the right effect. From this would result a complete necrosis *en masse* and an inflammation, but a simple one, with resulting granulation. The speaker took exception to a recent remark of Mr. Watson Cheyne, that all these cancers should be treated early with the knife, and the knife alone. This was an assertion too sweeping in its character.

Dr. Shepherd thought that in the majority of cases the knife was the proper instrument, but in cancer on the scalp or at the side of the nose, escharotics if properly applied were better than any other remedy. Cancer in the first place was local and ought to be treated immediately by removal.

Dominion Registration.—Dr. Roddick, in an able an exhaustive speech on the whole subject, presented the matter in its proper light to the members of the association. The plan or scheme as outlined by him was as follows: There was to be a central board, called the Dominion Medical Council. Each province would have three representatives on that board: one nominated by the governor in council, one appointed by the Provincial Medical Council, and the third the president of each provincial council *ex officio*. All practitioners of ten years' standing in any one province would be, should they so desire, licensed by this Dominion Council to practice in any of the other provinces, but no practitioner would be so licensed until he was a licentiate of ten years' standing. The provincial medical councils were to remain and go on doing their work as in the past. The Dominion would look after the licensing of young practitioners when they desired to practise in any province they pleased, and as aforesaid.

Dr. Arthur Williams, of Ingersoll, Ont., representing the Ontario Medical Council, supported this proposed plan, in a vigorous speech, and at the conclusion moved a resolution indorsing Dr. Roddick's scheme, and further authorizing that gentleman to proceed to Parliament at the next session and bring about the consummation so much to be desired.

Dr. McNeil, of Prince Edward Island, seconded the resolution, and many others supported it, after which it was put to the meeting and carried unanimously.

Notes on Recent European Conventions.—Dr. R. A. Reeve, of Toronto, gave his experience at several of these meetings this summer while in Europe, at the British Medical, the International Otological, and the International Ophthalmological congresses. He cited several of the papers and addresses which he had heard, and spoke of the newer remedies of the silver salts, such as protargol and argentin, which are proving effective and less irritating than nitrate of silver in conjunctivitis, etc.

Surgery Among the Insane.—This was the subject of Dr. A. T. Hobbs' paper. Dr. Hobbs is on the staff of the Asylum for the Insane at London, Ont. He discussed the differences in operating upon sane and insane persons, the difficulty of making examinations, especially in women, and a large number of insane women have pelvic disease requiring attention. Ether was the anesthetic used; chloroform rendered the patient so weak after the operation so that its use was discontinued. A good many statistics of operations were given. The best results were from inflammatory diseases of the pelvic organs when operated upon.

Dr. Ernest Hall, of Toronto, confirmed Hobbs in his opinion, stating that he believed 92 per cent. of insane women had pelvic disease.

Craniectomy for Microcephalus.—This paper we have also been handed for publication by its writer, Dr. W. J. Wilson, of Toronto. We hope to insert it in our next issue. Dr. Wilson presented his patient, a boy, four and a half years old. Before the operation the only word the child could say was "Mamma." Now he can say many words, and is making rapid progress. He stands erect, and walks with his body straight; previous to the operation he bent forward, almost at the proverbial angle of 45°.

With many regrets that the time could not be longer, the 1899 meeting came to a close with the usual election of officers for the ensuing year. The vote resulted in the election of the following gentlemen:—President, Dr. R. W. Powell, Ottawa; Vice-President for Ontario, Dr. A. J. Johnson, of Toronto; Vice-President for Quebec, Dr. A. R. Marsalais. of Montreal; Vice-President for New Brunswick, Dr. Meyers, of Monckton; Vice-President for Nova Scotia, Dr. W. G. Putnam, of Yarmouth; Vice-President for Prince Edward Island, Dr. S. P. Jenkins, of Charlottetown; Vice-President for Manitoba, Dr. W. J. Neilson, of Winnipeg; Vice-President for North-West Torritories, Dr. Hugh Bain, of Prince Albert; Vice-President for British Columbia, Dr. O. M. Jones, of Victoria; Treasurer, Dr. H. B. Small, of Ottawa; General Secretary, Dr. F. N. G. Starr, of Toronto.

Next year the Canadian Medical Association will convene at the capital city—Ottawa.



THE COUNTRY DOCTOR.

From the painting of the National Academy of Design, 1899 Spring Exhibition, exhibited by the artist in competition for the Hallgarten prize, and purchased by The Arlington Chemical Company for $1,000.00

The Canadian Journal of Medicine and Surgery

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Oral Surgery—E. H. ADAMS, M.D., D.D.S., Toronto.

Surgical Pathology—T. H. MANLEY, M.D., New York, Visiting Surgeon to Harlem Hospital, Professor of Surgery, New York School of Clinical Medicine, New York, etc., etc.

Medicine—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; and W. J. WILSON, M.D., Toronto, Physician Toronto Western Hospital.

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Gynæcology and Obstetrics—GEO. T. MCKEOUGH, M.D., M.R.C.S. Eng., Chatham, Ont.; and J. H. LOWE, M.D., Newmarket, Ont.

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Pharmacology and Therapeutics—A. J. HARRINGTON, M.D., M.R.C.S.Eng., Toronto.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

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VOL. VI. TORONTO, OCTOBER, 1899. NO. 4.

Editorials.

SANITARY IMPROVEMENTS IN COUNTRY HOUSES.

A FEW years ago an American critic, in decrying farm life, said that people could not be as healthy on a farm as in a city, so long as farmers lived in houses which had low ceilings, poor ventilation, and cellars filled with rotting turnips. He might have gone further and indicated in the village or country house some other sources of impurity which are not found in the ordinary city house.

For instance, the cellars in country houses are generally dark. The housewife closes the windows and keeps her cellar dark, because in summer it will be cooler, and in winter the windows are boarded up to keep out the cold. It is also damp, because no precautions are taken to favor dryness when the house is being built. In the country the usual method is to dig an excavation of the required size, which is then surrounded by a wall upon which the building is erected. No attempt is made to exclude the air of the soil and soil moisture, although the necessary preventive measures are easy of execution. The late Colonel Waring showed that six inches of wet clay, well rammed while wet, is one of the safest materials to put on a cellar bottom, or about the foundation walls of a building. In the cellar, of course, it may be covered with concrete for cleanliness and good appearance. A solid course of slate in the foundation wall, above the ground level, will prevent the soaking up into the structure of the moisture of a heavy soil. Cellars holding more or less water are common in the country, especially in the spring, while at all seasons the city dwelling of modern construction has a comparatively dry and impervious foundation. In a city house the chief sources of impurity are found in the kitchen sink and the bathroom; but these rarely ever breed the trouble that is likely to arise from the old privy and the saturated soil near the kitchen door of a country house.

To overcome the evils arising from primitive methods of disposing of slop water and excreta, drainage from a country house into a system of subsoil tile drains has been recommended. An inexpensive method of accomplishing this reform in houses having plumbing appliances, and in which water is obtained from a public supply, or a tank in the house supplied by a wind-mill or hand pump, is published in "Pamphlet No. 1," 1893, issued by the Provincial Board of Health, Ontario. This system, if extended, is ample for dealing with the total sewage of any small Canadian town or village in the most perfect fashion; while the cost to a householder in the country, who has a garden beside his house, is very little.

The old well with its pure, sweet water is too often a delusion which becomes the direct cause of attacks of typhoid fever in country people. Warned by outbreaks of this water-borne disease, a great many rural municipal authorities in Ontario have established public waterworks, and others are contemplating similar action. Now that the era of good times has reappeared in Ontario building permits are as freely called for in the country as in the

city. The general declaration of observers in Ontario towns is that they never saw so many fine houses and barns being erected in the country as at present. It is also stated that the new houses are nearly all of brick, with large, airy rooms, and provided with bath-rooms, cellars, and furnaces. Thus, the reproach of low-ceilinged, ill-ventilated houses is being taken away.

We sincerely hope that the builder of the modern brick house may have many imitators, in fact, that his example may prove contagious. Certainly, if ground air and moisture are excluded from the building, an ample supply of pure water secured, house drainage into field tiles provided for, and garbage buried in the garden, the good people who live in the new brick house in the country have little to deplore in their own sanitary conditions, and less to envy in the more highly-taxed improvements of their city friends.

J. J. C.

THE CANADIAN MEDICAL ASSOCIATION.

NINETY in the shade! "A hot time in the old town" whistled lustily a physician as he entered the Normal School building to join in the feast of reason and flow of eloquence at the opening session of the thirty-second annual meeting of the Canadian Medical Association. Nobody strangled the musical doctor and nobody smiled; the furnace seven times heated is a "fearsome" subject to contemplate, the experience is not capable of expression in Bostonian English.

Lately some of the medical journals have been decrying the holding of so many medical conventions and rather depreciating the value of the work done and the prominence given to the social side. Certainly the thought that attendance at the annual meeting of the Canadian Medical Association is "a game not worth the candle," evidently has never entered the minds of any of its members. The attendance this year outnumbered that of recent years, and the papers read were exceptionally interesting and many in number. Several of the Toronto men very wisely gave place to their guests, requesting that, owing to the shortness of the time, their papers be "taken as read."

We think busy physicians need the opportunity for the cultivation of *esprit de corps* such as a convention affords, also united thought, and a voice in the arrangement even of the petty bubbles, quibbles, and ethical technicalities that may mean so much, or so

little, to the majority of the profession; also the opportunity to be under the good generalship of the powers that be, and the chance to enjoy a few social pleasures and perhaps a bit of sight-seeing, for all too few are the hours that the genus *medico* can call his own or devote to a jaunt about the towns and cities of his Ain Countree.

One of the most important discussions which took place at this year's meeting, and one which is fraught with the utmost concern to the profession of this country was that on "Inter-provincial Registration." Dr. Roddick is deserving of the sincere thanks of the profession for the work which he has accomplished, and we look forward to his scheme becoming a reality in the near future.

The visiting physicians were kindly in their expressions of appreciation both as to the scientific and social programme provided. The president is to be heartily congratulated upon the way in which he discharged his duties. The committee of arrangement tried to crowd in all they could, but had a big rival in the "greater than has been" Fair which claimed daily an amused or admiring number from the ranks of the physicians. However, a reception and musicale, a garden party at the Yacht Club on the Island, especially for the ladies, a luncheon (tendered by the Directors) at the Fair, and for the closing evening of the convention, a moonlight excursion, were planned and brought to a successful issue. Alas, at "the moonlighter" the moon failed to put in an appearance and never sent even a wireless telegram of regret; but the blaze of firework glory that moves to cheers a weary multitude of the devotees of Canada's Greatest Exhibition illumined the darkness until rain drops began to fall, then the banjos and quartette on board the boat began to call loudly for their *Lulu*, and no wonder, for in the big saloon stood a groaning buffet and ice cream galore, with the compliments of the Mayor and all the city fathers.

W. A. Y.

PREVENTION OF CONTAGION IN HOSPITALS.

The treatment of a case of typhoid fever in a large, well-kept house is a menace to the other inmates, as sick-room infection is more common than is generally supposed. In the homes of the poor, which are often small and overcrowded, the danger of infection is relatively greater. These common evils, together with inability to pay for nursing and the fear of contagion on the part of neighbors induce people to send typhoid fever patients to a

general hospital. Generally speaking the change is decidedly to the advantage of the patient. Sometimes, however, a patient sent to a general hospital gets a contagious disease which he did not bring there. Thus a youth, sent in for a fracture of the radius, contracts typhoid fever four weeks after his arrival and dies of it. In such a case it would have been more humane to have let the youth stay at home, carrying his arm in splints, rather than send him away into an institution where the infection of typhoid fever is present in the atmosphere. Then, a patient sent to an isolation hospital with scarlatina, may, almost simultaneously, develop measles, and the latter disease, as frequently happens, may be complicated with broncho-pneumonia. A fatal result takes place. An error of diagnosis is charged and much angry feeling excited in the public mind, although the hospital medical staff and the nurses have done their full duty by the patient. It cannot be denied that communicable diseases are frequently transmitted from patient to patient in hospitals for the diseases of children. Physicians agree that measles treated in hospitals show a large mortality due to the transmission of broncho-pneumonia, and in spite of separate pavilions other contagious diseases are communicated in isolation hospitals. As the number of infectious diseases is more clearly defined and becomes larger, prophylaxis will require to change in hospitals. Typhoid fever, tuberculosis, pneumonia, broncho-pneumonia, even mumps are treated in general hospitals. It seems strange to see patients with these diseases placed in wards freely communicating with other wards, when cases of erysipelas and whooping cough are fully isolated. General hospital hygiene should provide for the careful segregation of cases of communicable disease, and should always have, in addition to ordinary wards, rooms for doubtful cases, which should be used until the diagnosis in each case is quite certain. J. J. C.

TEN YEARS AFTER.

DURING the late session of the Canadian Medical Association, held in Toronto, it was expected that there would be in the city quite a number of the old Toronto School of Medicine Class of '89, and a reunion dinner was accordingly arranged for the evening of August 31st, which, through the efforts of Drs. Starr, Silverthorn, Patton, Groves and Harrington, passed off charmingly. The class numbered

eighty-one, but less than a third of the original number were present, many having drifted in the strenuous race of life into distant countries, and seven fallen silently out of that race forever.

A moment of peculiar interest was when the babel of voices arose as the former confreres gathered about the board, scrutinizing each other's faces, at first often blankly, and then with boisterous outbursts of recognition. Many had grown illustrious, others had grown beards, one or two had grown fat, and a few had grown families—but no one seemed to have grown old.

J. C. Patton had the head of the table, and, as a specialty showed unusual gifts for the responsibilities of chairmanship while A. H. Holliday, who had come all the way from northern Michigan to act as vice, made a brilliant second. The chief condiment of the collation seemed to be Attic salt, and the secretary, G. Silverthorne's report, was permeated with this delightful adjuvant. "Gid," by the way, was one of those who had not changed a particle, and the sight of the familiar face, perhaps more than anything else, unless one, except the presence of the venerable professor of anatomy, made the reunited class feel as if they were back in the old theatre, with Batty staggering in with a "sub," or some poor devil being gently "elevated" to the upper row.

James H. Richardson, the "Grand Old Man," was the guest of honor, and in a speech full of bygone pleasantry, expressed not a little pardonable pride in a school of medicine, of which he was the first graduate, and for many years one of the moving spirits. As the old man stood there among his former pupils, with voice unchanged, and the same piercing eye, though with the hair perhaps a shade whiter upon his massive brow, more than one felt that in him *fin de siécle* medicine possessed one of the last noble links which binds our period to that of Larrey, Dupuytren, Rokitansky, and Skoda. The spectacle was not one soon to be forgotten. Yet he must needs have his joke too; for with a face suddenly darkening, the old professor turned sternly upon the peccant Starr, and solemnly called down upon his head the disapprobation of all worthy men for a celibacy so impiously persisted in.

Meanwhile A. J. Harrington sang *con spirito* a simple little lyric of first love, so tender and so touching that it moved the hardest Hart there; and the boys had to take another beer all round. F. N. G. Starr followed with a series of old-time college recollections, in which, with affectionate freedom, he dealt with the *personel* of both the class and the faculty—*forsan et haec olim*

meminisse iuvabit—and as a solemn closing, and befitting such an occasion, E. H. Stafford, to whom histrionic gifts had been attributed by the same discriminating conspirators who had to Harrington assigned vocal, recited a selection from the theological writings of *Baculavadus*, a copy of which (in the expurgated form) appears elsewhere in this issue.

Among the men of '89 present, besides those who have been already mentioned, were: G. Chambers, F. E. Godfrey, R. G. Howell, E. Meek, J. Noble, F. H. Scherk, O. Sisley and T. S. Webster.

E. H. S.

DRAINAGE AND MALARIA IN TORONTO

A SUBJECT which would interest all physicians and freshen the recollections of the older practitioners would be the description of types of disease prevalent in different sections of Ontario, thirty, forty, or even fifty years ago. The physical conditions of the soil, which were due to the retention of water, have in many well settled parts of the Province been changed by drainage, and types of disease which formerly used to call for the administration of quinine are now rarely observed. At one time, and that not very long ago, Toronto was declared by British medical authorities to be an agueish place. Parke's "Hygiene," sixth English edition, published in 1883, says: "The town stands on ground originally marshy. The new barracks are built on limestone rocks of the Silurian age. Intermittent fevers among the civil population; not very prevalent among the troops." The mortality from malarial fevers is not given. The surface of the soil at Toronto, falling rapidly towards Lake Ontario, is favorable to natural drainage and the water used to reach the lake through several small creeks, running in a direction from the north-west towards the south-east; but in the southerly portion of the city, near the mouths of these creeks, and at some places higher up along their banks, swamps had formed. Thirty years, however, before the publication of the work mentioned, many of these creeks and swamps had been drained into the main sewers constructed in the streets, running to the waterside. So that the conditions which produced a marsh, having been removed by drainage and drying of the soil, malarial fevers among the civil population in Toronto had become rare. So rare, indeed, that unless among the population living in the valley of the Don, in the eastern quarter of the city or in the valley of

the Humber, on its western border, malaria could not be said to exist in Toronto. The writer knows many persons, born and brought up in Toronto previous to 1883, who never had malarial fever. Then no deaths in Toronto are ascribed to malarial fevers in the annual reports of the Registrar-General of Ontario for the years 1896 and 1897. The data given in Parke's Hygiene were probably obtained from the surgeons of the different British regiments garrisoned at Toronto up to 1867.

These statistics were no longer correct in 1883, and since then the drying of the soil and the drainage of the site of the city have been so complete (there are 230 miles of sewers) that if a Toronto practitioner encounters a case of ague he is almost sure the patient is a stranger and probably from the United States.

We make this correction because, among other reasons, Parke's Hygiene is read by physicians in different parts of the world, and it is but fair that the facts about Toronto's present freedom from malaria should be correctly stated. J. J. C.

OUR CANADIAN MEDICAL ASSOCIATION REPORT.

THE CANADIAN JOURNAL OF MEDICINE AND SURGERY has been enabled, through the courtesy of many of the physicians who prepared and read such comprehensive papers at this year's meeting of the Association, to publish them exclusively for Canada.

At the request of Dr. G. M. Gould, who was a welcome guest at the meeting, the papers appearing in this issue have been sent on for simultaneous publication in the *Philadelphia Monthly Medical Journal*, of which he is the editor.

The management of this journal appreciate their opportunity, and so deem it advisable to curtail somewhat the formal report of the society's proceedings, thereby leaving the extra space for the publication of the papers themselves. W. A. Y.

Dr. W. F. GALLOW, of College Street, Toronto, was married, on September 13th, at Goderich, Ont. We wish him the best of good luck.

Dr. J. J. CASSIDY spent some days in London, Ont., last month, when carrying out his duties as president of the Medical Health Officers' Association, which convened in that town in their annual session. Under his guidance the meeting was an immense success

THE FIRST CASE.

(AN OBSTETRICAL BALLAD.)

In hours that brim with memories, with pleasures past beset,
There still are some few little things we sooner would forget;
Of both, as I look back ten years—it only seems a week—
Of both the tragic and the gay, I shall a moment speak.

First, of a little incident that I remember yet;
And will not in a score of years be willing to forget;
It was the Council Finals, and with feelings that appall,
Despondently we gathered in the sickening Council Hall.

The paper was distributed, and we were reading them;
It did not strike me that it was a literary gem;
And only one thing to my mind was absolutely clear—
Were I an inspired writer I could get no "fifty" here.

Meanwhile the minions of the hall in rubber overshoes
About us hovered noiselessly, lest we to err should choose;
While on the platform, high enthroned, and proud of what he'd done,
Sat, just as he sits here to-night, old Doctor Richardson.

After a time, however, he stalked down the hall awhile
And—what had he to rack his soul!—beamed with a peaceful smile.
I gnawed my pen as he approached—my face was grey, perhaps;
And he saw I was moribund with a profound collapse.

So by my chair he paused, and for a moment took his stand;
Glared as he wished to eat me—then reached out and shook my hand,
"Good luck to you, sir," he exclaimed—as if he meant it, too;
And these words of the grand old man cheered me with courage new.

The other little matter is the sort one would forget;
I do not tell it frequently—I never told it yet.
The first case that I had was not what one might call a case,
Because I never really met that patient face to face:

"Gee Whiz!" the husband said when I appeared before the same,
"I thought you were a doctress—isn't Ezra a woman's name?
The wife she wants a female—wouldn't have no other brung—
And then besides your being a man—you look so gol darned young!"

I nursed a longing for revenge six weeks with morbid mind;
And then I *had* my vengeance on the "cruel of my kind;"
A dissolute young carpenter (who led a troubled life)
Prayed me upon his hands and knees to come and see his wife.

The husband left me at the door, and I went in instead.
With an enlarged abdomen, she reclined upon her bed;
Her mother, dropping tears and rags, tramped up and down the room.
While I upset a *pot de chambre*, and tripped across a broom.

"My good soul, let me see your tongue!"—her pulse I also took;—
But 'twas a different region that the mother wished to look;
"O Lord," she said, "put up with that, are you a doctor, say,
And don't observe the poor sweet lamb is in a family way?"

"Madam, enlightened doctors always in this way begin—
I *now* will carefully proceed to—see what is within."
"O mamma" next the suffering wife her parent did implore,
"I don't think that this doctor ever had a case before."

" Enlightened doctors usually," I said, with scowl severe,
" First diagnose you *there* before they diagnose you *here*.
Aha ! 'tis hydrocephalus ! The chances now are grave ;
Nothing can save this infant's life—but yours I'll try to save."

" Bear down a little more, poor dear," the mother interposed ;
" No, not so much, I tell you, for the os is—nearly closed—
Be still—by Jove you've done it now ! "—" Done what ? " the mother said,
" The sharp coccygeal bones," I hissed, " have tapped the offspring's head."

" I tell you it's the waters broke,"—" I tell you that it's not—
She bore down, and she smashed its head—the only head it's got.
But stay !—perhaps your right, for now, after the bag is burst,
I notice there's *another* head, and smaller than the first."

" Perhaps it is her maiden head," the jeering mother cried—
" There, take a little drink, poor dear, and *I'll* sit by your side."
" I think it is a maiden's head," I muttered in a minute ;
" Where is that flannel that you had—you'd better wrap it in it."

" Of all the doctors in the town, for that dull man to bring,"
She shrieked again, " will you, or *I*, tie up its navel string ? "
Next thing the raptured grandmother with lard had rubbed it down,
And from the woodshed called the father to behold—his own !

The two then to the kitchen went, where loud the infant bawled ;
And I approached the mother once again—and grew appalled ;
For there I found another head (exactly like the first)
But hardly liked to handle it, for fear that it would burst.

I reached out for the vaseline, and in a moment more,
A second infant sprang to light with an astounding roar ;
Amazed at the phenomenon, I had sufficient sense
To tie the cord, and see in all the hand of Providence !

Meanwhile the firstborn yelled so loud, they did not hear me call,
Thinking the second's squawling but an echo from the wall,
I wrapped it in a petticoat, and to them went with it,
That shut the hateful mother up—and sobered *him* a bit.

" This is *your* work (she turned on him) this is *your* work, I say ;
And the poor dove half dead with care, and no rest any day !
This is the sort of man that *you* have proved yourself to be !
My God, you men, you men, have you the face to look at me ?

But it shall not occur again—and you shall sweat for it—"
The husband here emphatically, but briefly, answered " Nit."
And I went back, and for the after birth performed my best—
See Playfair (if you have your copy still) for all the rest.

The dissolute young carpenter to whom I sent my duns,
I was not long in learning did not chance to be in funds ;
And so to settle up the score he built—deride him not !
A little wooden building at the rear end of my lot.

BACULAVADUS (1674-1737).

DR. G. A. PETERS was married ten days ago to Miss Meredith, daughter of the Chief Justice.

Dr. GEO. BINGHAM, of Isabella Street, was married a few weeks ago to a popular Kingston lady.

The Physician's Library.

BOOK REVIEWS.

General Pathology, or the Science of the Causes, Nature, and Course of the Pathological Disturbances which occur in the Living Subject. By Dr. ERNEST ZIEGLER, Professor of Pathological Anatomy and of General Pathology at the University of Freiburg in Briesgan, translated from the ninth revised German edition by Drs. Theodore Dunham, Edward M. Foote, Philip H. Hiss, jr., Walter B. James, William G. Le Boutillier, and Mathias Nicoll, jr., of New York; Dr. B. Meade Bolton, Philadelphia, Pa, : and Drs. Leonard Woolsey Bacon, jr., John S. Ely, and R. A. McDonnell, of New Haven, Conn. Editor, Dr. Albert H. Buck, New York. New York : William Wood & Company. 1899.

One more edition of Ziegler's "General Pathology" has been written, translated, edited, and published, and this, the ninth revised edition, gives us the most finished and scientific work on the subject yet in print. In the preceding edition the author made many valuable revisions. More space was allotted to the consideration of pathological processes, their causes, their mode of origin, the course they pursue, and their sequela. Special consideration was given to the subjects of general etiology of diseases, and pathological physiology ; and in order to be in harmony with these alterations, the author thought it advisable to change the title from "General Pathological Anatomy" to that of "General Pathology." The author argued (we think correctly) that a text-book on this subject intended for the use of medical men should deal with the matter in very concise manner, and that compendious treaties of this nature would not tend to promote the study of pathological anatomy, and would not make the student's task easier.

In the first place, it is not possible within the limits of a small compend to treat general pathology and pathological anatomy in a scientific manner. Then, in the next place, it is extremely difficult, owing to the amount and richness of material obtainable, to treat the subject in such a manner that the book shall not be a mere catalogue of facts.

These alterations and additions met with such general approval that the author has adopted them in this his ninth edition, coupled with a full account of the advances which have been made in general pathology and pathological anatomy during the last few years. At the same time the author has, by carefully rewriting the text in places where new light had been furnished by recent investigations, kept this book from being too bulky. The most radical changes are found in Chapters IV. and VII., which have been entirely re-written. The arrangement of the degenerations which led to the formation of hyaline products has simplified this subject very materially. The author groups them under four heads : (1) The formation of colloid by epithelium and the epithelial hyaline concretions. (2) The pathological cornification of epithelium. (3) The amyloid degeneration of connective tissue and the amyloid concretions. (4) The hyaline degeneration of connective tissue and the hyaline products of connective tissue cells ; by this classification we obtain a good general idea of the different processes under consideration.

The subject of pathological formation and absence of pigment has been very fully considered, and we find the many forms of albinism taken up as follows : (1) Leukopathia congenita ; (2) leukopathia acquisita ; (3)

leukoderma. This portion of the work is especially interesting and useful, in that there has been comparatively little written on this subject up to date.

In chapter VII. we find the tumors divided into three large groups: (*a*) Tumors of the connective substances; (*b*) epithelial tumors, and (*c*) teratoid tumors and cysts. This division very much lessens the perplexity that surrounds the consideration of this subject. The author has been careful to keep out the infectious granulation growths from among the tumors, as their presence there would only tend to confuse the reader. Forty pages have been reserved for the consideration of inflammation. The clear description of this most important section should of itself recommend this book to all. The author's definition of inflammation, viz., that it is essentially a *local tissue degeneration combined with pathological exudations from the blood vessels* caused by some injurious agency, and with these pathological changes are associated, sometimes earlier, sometimes later, tissue-proliferations leading to regeneration or to hypertrophy, is, we think, an excellent standpoint from which one may view the different processes that form an essential part of inflammation. He first describes the phenomena of inflammation in order as they occur, then the different exudates that are met with, and lastly repair; the processes of chemotaxis and phagocytosis being well explained.

In chapter VIII. will be found an especially interesting description of the disturbances of development and the resulting malformations. The chapter is divided into two sections. The first contains a general consideration in regard to these disturbances, their causes, classification, etc. The second part deals with the special malformations.

Considerable space has been given to the different bacteria, the usual classification has been adopted, but the bacteria which assumes different forms as they advance in their development, have been grouped under the head of polymorphous bacilli, and in this way have not been separated from the group of bacilli to which they are closely related, and thus rendering these processes less difficult to comprehend. There is a full description of the bacillus of syphilis as described by Lustgarten, but the author considers the bacilli can hardly be used for differential diagnosis at the present time. There are a large number of additional cuts and illustrations, carefully prepared. This is especially noticeable in the chapter on Tumors. The colored plates of melano-sarcoma, osteo-sarcoma, papillary cystoma of ovary, mucous carcinoma of mammary gland, and adenocystoma of testicle, being particularly fine and true. As a result of the care taken by the translators, this work has in no way depreciated in value by the process of translation.

We can heartily congratulate the publishers, William Wood & Co., New York, on the excellent text, paper, and binding of this work. In conclusion, we sincerely recommend this the latest effort of Dr. Ernest Ziegler to both medical men and students. W. H. P.

General Physiology. An outline of the Science of Life. By MAX VERWORN, of Jena, translated from the second German edition, and edited by Frederick S. Lee, Columbia University. Macmillan & Co., Ltd. 1899. Price, 15s. net.

The object of this work is explained by the author in his preface to the first edition. He says: "I wished to write something that would appeal first to my fellow physiologists, and offer them, besides certain new facts and ideas, a summary of our scattered knowledge. But at the same time I wished the work to give to any interested scientific reader, whether a student of medicine, philosophy, botany, or zoology, an outlook over the problems, facts, theories, and hypotheses of life."

The first chapter deals with "The Aims and Methods of Physiological Research." It contains a historical review of the rise and progress of physiological investigation, and includes a very interesting discussion on the relation of psychology to physiology.

The second chapter treats of "Living Substance." The simplest individual element of living substance is the cell. "All living individuals of whatever order, either are composed of cells as the elementary structural components, or

are themselves free—living cells. The cell must, therefore, be the seat of those events, the expression of which is life." "The cell is a bit of protoplasm containing a distinct nucleus."

"What is called life is a series of vital phenomena very unequal in importance." These vital phenomena are divided into three groups, and are associated with changes of substance, of form, and of energy. The changes of substance are due to assimulation and dissimulation, or, in other words, to the process of metabolism.

Chapter four is given up to a discussion of the "General Conditions of Life." The general external conditions of life are food, water, oxygen, temperature, and pressure. The "Origin of Life Upon the Earth" is considered in this chapter, and it forms one of the most entertaining parts of the book. Four theories concerning the origin of life upon the earth are brought under consideration: 1. "The Doctrine of Spontaneous Generation." 2. "The Theory of Cosmozoa," or the theory that life has always been transferred from one world to another. "Starting from the idea that small, solid particles are moving about everywhere in space, and in the rapid flight of the heavenly bodies are continually being stripped off from them, Richter assumes that, at the same time and attached to these solid particles, germs of micro-organisms capable of life are also continually being thrown off from such heavenly bodies as are inhabited, and carried to others." "Organic life, therefore, has never originated, but has always been transferred from one world to another." 3. "Preyers' Theory of the Continuity of Life." "We do not say, therefore, that protoplasm as such existed from the beginning of the earth's formation; or that without beginning it wandered as such from elsewhere out of space to the cooled earth; or, still less, that without life it became compounded upon the planets out of inorganic bodies, as spontaneous generation would have it; but we maintain that the movement that exists in the universe without beginning is life." 4. Pflüger's Idea." "It is seen how strongly and remarkably all facts of chemistry point to fire as the force that has produced by synthesis the constituents of proteid. In other words, life is derived from fire, and its fundamental conditions were laid down at a time when the earth was still an incandescent ball."

A chapter on "Stimuli and Their Actions" and a concluding one on "The Mechanisms of Life," brings this interesting and instructive book to a close. It is a book that is sure to be prized by the progressive medical practitioner. While many of the author's conclusions and inferences may be open to criticism, still the work is written in a scientific manner, and is a distinct and valuable addition to the litraeture of physiology. A. E.

A Text-book of Pharmacology and Therapeutics, or the Action of Drugs in Health and Disease. By ARTHUR R. CUSHING, M.A., M.D. Philadelphia and New York: Lea Bros. & Co.

This is an exceedingly good work, and the author has succeeded in compiling a book which every physician and student should possess. Each drug is systematically classified, and its preparation shortly and concisely described, followed by its therapeutical action in fuller detail. The author's classification differs somewhat from the current works on this subject, and has, in my opinion, been carefully considered. The first part is devoted to organic substances, which are characterized chiefly by their local action, as demulcents, emollients, etc. The second part describes organic substances characterized chiefly by their action after absorption, as alcohol, strychnia, opium, etc. Part three treats of combinations of the alkalies, alkaline earths, acids, and allied bodies. Part four, of the heavy metals. Part five, of ferments, secretions, and toxalbumins, while the sixth, or concluding part, is devoted to menstrua and mechanical remedies. This mode of classification makes it an excellent work for quick reference. We are particularly well pleased with the thorough manner in which the physiological action of the more powerful drugs are described. This is most essential to the practitioner who has to rely on the experimentalist for his knowledge, and the author has been most careful and painstaking in his laboratory experiments. The book is printed on good paper, with an excellent

type, and is bound as Lea Bros. & Co. always bind their works, with an eye to durability as well as to external appearance. It seems to us that this work will be in much demand. A. J. H.

Degeneration: Its Causes, Signs and Results. By EUGENE S. TALBOT, M.D., D.D.S. London: Walter Scott. Contemporary Science Series. 6s.

To medical science the subject of degeneration, in its legitimate sense, is of quite as much, if not of more importance, than evolution. Though the scientific study of degeneration is of comparatively recent date, the idea is itself a very old one. Hesiod suggested the notion in his Theogonia: and from that day to this such expressions as "These degenerate days," and "*O tempora, O mores!*" have been of common currency in the conversation of all races. The genus homo excels in dulness, and would sooner imagine itself fallen from a high estate than risen from a low one. The attitude is especially marked in servant girls and the elderly vendors of lead pencils. Hence the ready acceptance given to the pessimistic theory of degeneration, and the uncouth antagonism with which Darwin was at first warded off.

To Cesare Lombroso, of Turin, may be acceded the honor of having examined the phenomena of degeneration in the modern scientific spirit. He has been followed, unfortunately, by certain other writers, who, in an altogether different spirit, have adopted the term as an insolent catchword for scurrilous personal attacks upon political and literary enemies. The rather clever, but altogether unjustifiable lampoon of Nordau may be taken as a case in point. At present it would seem that there was some danger of the term being wrested from the hands of science, and relegated to the use of charlatans and unscrupulous journalists.

In the work before us, wherein an outline of the subject is attempted, the personal element is lacking, however, and the writer (who is a dentist) pays considerable attention to the degenerative stigmata of the teeth. In the past the ears, and nose, and jaw, have come in for an undue share in this respect; but now that Bertillon has covered himself with glory at the trial at Rennes, some new departure in the stigmatic repertoire will prove timely.

The temptation which writers on degeneration must feel to lay down general axioms seems to have been always very strong. They have all yielded to it. According to the criteria of the writer before us, Mr. Gladstone and Robert Louis Stevenson would both, though somewhat unlike in character, be degenerates in common. And there are other complications. Death itself is an uncontrovertable sign of pre-existing degeneration. Indeed, the study, as at present pursued, seems to have no bounds or limits of any sort. Every natural instinct or appetite is a pathological result of some "nerve storm," and the lack of the same, a form of dementia. Writers upon degeneration will soon have to be licensed by a sane medical board before they can write. From degeneration there is escape, it seems, for none but the authors themselves; and on the tower of Babel which they are building, even they may yet come to grief in a chaos of words. E. H. S.

The Practice of Dental Medicine. By GEORGE F. EAMES, M.D., D.D.S., Professor of Pathology and Therapeutics in Boston Dental College, Member of the Massachusetts Medical Society, and the American Medical Association; ex-President of the Massachusetts Dental Society; Member of the American Academy of Dental Science; Honorary Member of the Maine Dental So-Society, etc. Containing thirty-eight illustrations, and three colored plates. Philadelphia: The S. S. White Dental Manufacturing Co.; London, Eng.: Claudius Ash & Sons, Ltd. 1899.

It is surprising the amount of ignorance manifested by the general medical profession in medico-dental subjects, and the practise of dental medicine, though written, perhaps, more especially for the dental student, and the dentist himself should find a place also in the library of every progressive physician.

The names of the publishers, The S. S. White Dental Manufacturing Co., of Philadelphia, and Claudius Ash & Sons, Limited, London, Eng., are always a guarantee for a high-class publication, whether it be in the subject matter itself or in the quality of the paper, the letter-press, and the engravings, and illustrations, and this book is certainly no exception to the general excellence of their work. The book contains three very fine colored plates in addition to thirty-eight illustrations.

Too much stress cannot be laid on the importance of a higher education of both dentists and physicians as to the relations of local pathological conditions of the mouth and teeth to general pathological conditions.

The general scope of the work can be best understood by a glance at the table of contents. A couple of chapters are devoted to the general consideration of Pathology, and to the inflammatory process in general, and then several chapters to diverse conditions, presenting to the dental practitioner, such as Syncope, Hysteria, Neuralgia, Menstruation, Pregnancy, Hemorrhage, Constipation, Swallowing of Plates and other foreign bodies, and subjects involved in the administration of anesthetic agents.

Each of the following diseases having local expressions in the mouth have a chapter devoted to them :—Stomatitis, Diphtheria, Scurvy, Rhachitis, Scrofula, Chanchroid and Soft Chancre, Syphilis, Rheumatism, Dyspepsia, and Tetanus. Local diseases affecting the soft tissues of the mouth are next given consideration : Gingivitis, Pyorrhea, Alveolaris, Phagedenic, Pericementitis, Difficult Dentition, Salivray Fistula, Salivation and Ranula.

Following these are local diseases affecting the dental and surrounding bony tissues, and while some of these belong almost solely to the domain of the dental specialist, they are still very important to the general practitioner in making a correct diagnosis of many common oral diseases. Among these are dental caries :—Hypersensitive Dentine, Hyperemia of the Dental Pulp, Pulpitis, Suppuration and Abscess of the Dental pulp, Pericementitis, Dento-Alveolar Abscess, Dental Erosion Abrasion, Hypercementosis. Secondary Dentine, Pulp Nodules, Necrosis, Ankylosis of the Jaw.

The concluding chapters are devoted to diseases affecting the adnexa of the mouth—Empyema and other pathological conditions of the maxillary sinus, Hypertrophy of the Faucial Tonsils, Hypertrophy of the Adenoid Tissue in the post nasal space, and the Relation of adenoid vegetations to irregularities of the teeth and associate parts.

When we consider that the rather lengthy list of subjects are scientifically and thoroughly treated in a volume of less than 250 pages, we cannot help congratulating the author on the excellence of his work, and again recommending the careful perusal of its contents to every dental and medical practitioner.

E. H. A.

Asthma ; Recent Developments in Its Treatment. By Ernest Kingscote, M.B., C.M., L.R.C.S. Edin., Fellow of the Medical Society of London, etc. Author of "On So-called Spasmodic Asthma," with colored frontispiece and illustrations. London : Henry J. Glaisher.

This book is somewhat of a medley, but, partly because of this, it is a very interesting work. In a large experience the author has found the heart dilated in all the cases he has examined, and in the treatment of them he has found that restoring the heart to its normal size and strength is followed by permanent relief of the asthma. To relieve the cardiac dilatation he resorts to the now well-known Schott treatment by baths and exercises, and the results, he reports, are exceedingly creditable. He is an adherent of the theory that asthma is due to spasm of the bronchial muscles, and that this is always excited by vagal initation. In all cases a careful search should be made to localize the vagal initation, and then the treatment directed towards its removal. The diction is not all that could be desired, such expressions as "flop" and "quash" being more expressive than elegant. The work, however, is suggestive, and well worth perusal. The print is large and clear, and the book is creditable to the publisher.

A. M'P.

Claude Bernard. By Sir Michael Foster. London: Fisher Unwin. 3s. 6d.

In this little book, the eminent physiologist appears in the rôle of biographer, and tells the story of Claude Bernard's life in a simple and straightforward way, that has a peculiar charm, especially to those who are familiar with the writings of Sir Michael Foster upon other subjects. It is, moreover, not an uninteresting nor an uninstructive story; the way in which the young apothecary's clerk, and afterwards the aspiring dramatist, made his way to Paris, and there, instead of becoming a poet, became a great physician and physiologist. The book is a dainty little literary trifle, and will afford the medical reader a half hour of pleasure. To the publishers also is due the credit of having made it very attractive. E. H. S.

Dr. Jas. D. Thorburn has moved into his handsome new residence at 321 Bloor Street west.

Dr. W. P. Caven has, we a glad to say, recovered from his recent attack of typhoid fever.

Dr. G. A. Peters is now captain of a company in the Governor-General's Body Guard, having been promoted from a lieutenancy.

We take this opportunity of extending our sympathy towards Drs. Hutchison and Lapthorn Smith, of Montreal, on their recent heavy family bereavements.

We should have stated in our last issue that Wm. Wood & Co., New York, are the American publishers of Norman Walker's "Introduction to Dermatology.

Dr. F. N. G. Starr, Dr. J. M. McCallum, and Dr. H. T. Machell, returned a week or so ago after spending a delightful two weeks' holiday on a house boat in the Georgian Bay. Their hunting *stories* are not to be discounted, either.

It was a great pleasure to many to meet in Toronto last month Dr. George Gould, editor of the *Philadelphia Medical Journal*, and Dr. Foster, editor of the *New York Medical Journal*. Dr. Gould was the guest of Dr. Alex. McPhedran on College Street.

We take great pleasure in congratulating Dr. F. N. G. Starr on his being requested to accept a position as joint secretary to the Canadian National Committee of the World's International Congress of Medicine, which takes place at Paris in August, 1900.

Dr. W. B. Geikie, of Maitland Street, returned on the 3rd ultimo, after a delightful holiday spent in Auld Reekie. The genial doctor looks the picture of good health. Dr. Geikie will, as we already announced, devote himself from this date to consultation work.

We beg to announce that Dr. Alex. McPhedran offers his residence, No. 84 College Street for sale. This is an exceedingly commodious house, roomy, and built to suit, in every detail, a physician. Full particulars can be received, by telephone or letter, from the owner. Purchaser may move in as soon as Dr. McPhedran's new residence, on Bloor St. West, is ready for occupation.

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Original Contributions.

MASSAGE AND THE RELIEF OF EYE-STRAIN IN THE TREATMENT OF GLAUCOMA.*

BY GEORGE M. GOULD, M.D., OF PHILADELPHIA.

FOUR years ago†, I wrote concerning Glaucoma as follows: "Massage, properly and intelligently applied, would seem to be the most clearly indicated therapeutic measure to break up mechanically the clogging process, stimulate additional secretion of diluting and digestive fluid, and arouse normal function generally. I have had but one case of glaucoma since groping my way to this theoretic conception of the disease, and that was a typical case in which vision had been reduced to 20/100. I began by teaching the patient to some extent the principles, and accurately the manipulations, of massage of the globes of the eyes. There had been no considerable response of the pupil or of the glaucomatous process to eserin. Before proceeding to iridectomy I determined to try massage, and from the day it was instituted improvement began and the vision steadily rose to 20/30, with entire cessation of all the symptoms except that the paralyzed iris still remains somewhat mydriatic and wholly immobile."

During the last four years I have tried the same plan, coupled with the relief of eye-strain by appropriate glasses, in a number of cases, of which the following may serve as illustrations:

CASE 4255.—A man of fifty-two consulted me on April 2nd, 1896, with incipient stellar cataract of both eyes, a myopia of R. E.

* Read before the Canadian Medical Association, August 30th, 1899.

† "A Study of Muscæ, with Suggestions as to the Physiology of Intraocular Nutrition, the Etiology of Cataract, Glaucoma, etc." The *Medical News*, September 14th, 1895.

6 D., and L. E. 7 diopters, a visual acuity of 20/100, each eye, with correcting lenses. With the exception of pain he had the typical symptoms of glaucoma, a shallowed anterior chamber, widened and sluggish pupils, cupping of the discs, etc. The tension of the right was + 1, of the left + 2. I instructed his niece how to carry out massage, but it was not done so systematically and thoroughly as I wished. By earnest and thorough instructions I secured more effective exercise of massage until, by October, the tension was normal in the right and but doubtfully plus in the left. I wish particularly to note that at this time only R. E. − Sph. 4.50 D. and L. E. − 5.50 D. were required to give the man a visual acuity of 20/70, while at the first visit lenses 1.5 D. stronger were required to give 20/100. Both the patient and niece recognize that the globes soften under massage, and if it is not done at least once a day the tension is likely to rise. For three years the eyes have thus been kept normal, the vision remains 20/70, and the cataracts show no increase.

Incidentally, this latter fact would seem to prove a suggestion I made four years ago, that, as cataract is a denutritional process, and as massage increases nutrition, massage may prove a prophylactic measure in incipient cataract.

Case 4359.—A woman of sixty-six consulted me June 4th, 1896, giving a history of glaucoma during the last four years. The left eye had been operated upon nine months previously, but the operation had proved a failure in every sense of the term. The iris had been torn from about one-half of its attachment creating a large artificial pupil on the temporal side. The disc of this eye was deeply cupped, the vision reduced to counting of fingers. The tension was + 2. I was finally compelled by the confusion of the images to exclude this mutilated left eye from participating in vision by means of a ground glass. Its high tension was by massage almost immediately reduced to normal, with a tendency to rise when the massage is too long intermitted. The woman visits me about once a month; the eye has permanently remained painless, quiet, and with a normal or slightly elevated tension. At her first visit the right eye was over tense, + 1, and massage was also ordered, as also a lens correcting the ametropia + S. 1.50 + C. 0.50 ax. 140 = 20/20. At her last visit the ametropic correction was + S. 2.25 + C. 0.50 ax. 180, of course with a proper presbyopic addition. The vision remains perfect and the tension permanently and perfectly normal. She keeps up the massage every day with conscientious and intelligent accuracy.

Case 5298.—A woman of fifty-seven consulted me June 14th, 1898, who had been treated for glaucoma for two and a half years by another oculist. Sclerotomy had been performed in the right eye fourteen months previously. The vision was R. E. 20/40, L. E. 20/20 ?, with the incorrect glasses she was wearing. The field was narrowed in the right eye to an extramacular vision of from 10° to 20°. The disc was typically cupped. I at once insti-

tuted massage and soon brought the tension to normal. Two months after the first visit the tension was normal and the field doubled in extent. I now carefully tested the refraction and found the following ametropic error:

R. + S. 4.00 D. + C. 0.75 ax. 105° = 20/30 +
L. + S. 4.00 D. + C. 0.37 ax. 160° = 20/20 +
Exophoria 4°. Left hyperphoria 4°.

After the relief of the severe eye-strain by proper glasses and

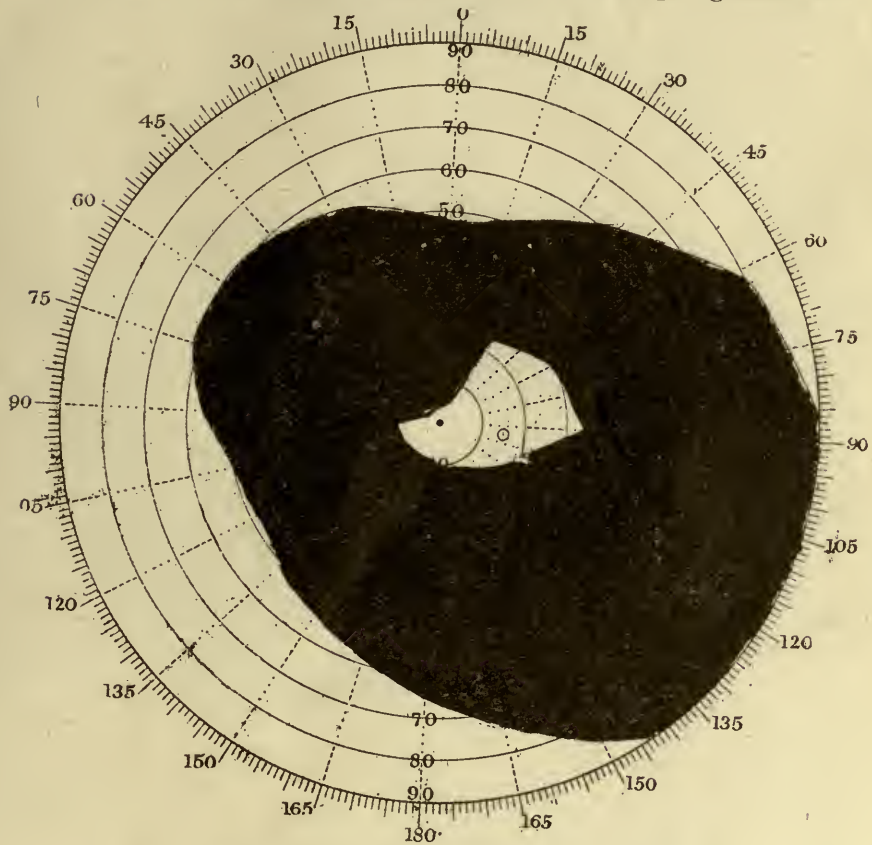


Fig. 1.—Case 5298. Form-field of right eye at first visit, on June 16th, 1898.

gymnastic exercises, the massage was discontinued, and there has since not been a symptom of glaucoma, no rise of tension and no trouble whatever from the eyes. On July 17th, 1899, the field had become much more extended. I submit three cuts of the fields made on June 16th, and August 26th, 1898, and July 17th, 1899.

Case 5456.—On December 11th, 1898, I was called to see a woman of fifty-two suffering from a severe attack of glaucoma of the right eye, which had appeared two weeks previously and which

in the absence of a specialist had been made worse by the use of atropin. Vision was abolished, the pain intense, with the usual objective symptoms of glaucoma, except the ophthalmoscopic ones, as it was impossible to secure even a red reflex from the retina. The patient would not allow the eye to be touched or operated upon, except imperfectly palpated to gain an estimate of the tension which I made out as between + 1 and + 2. By the use of eserin, leeches to the temple, etc., with appropriate general treatment, I

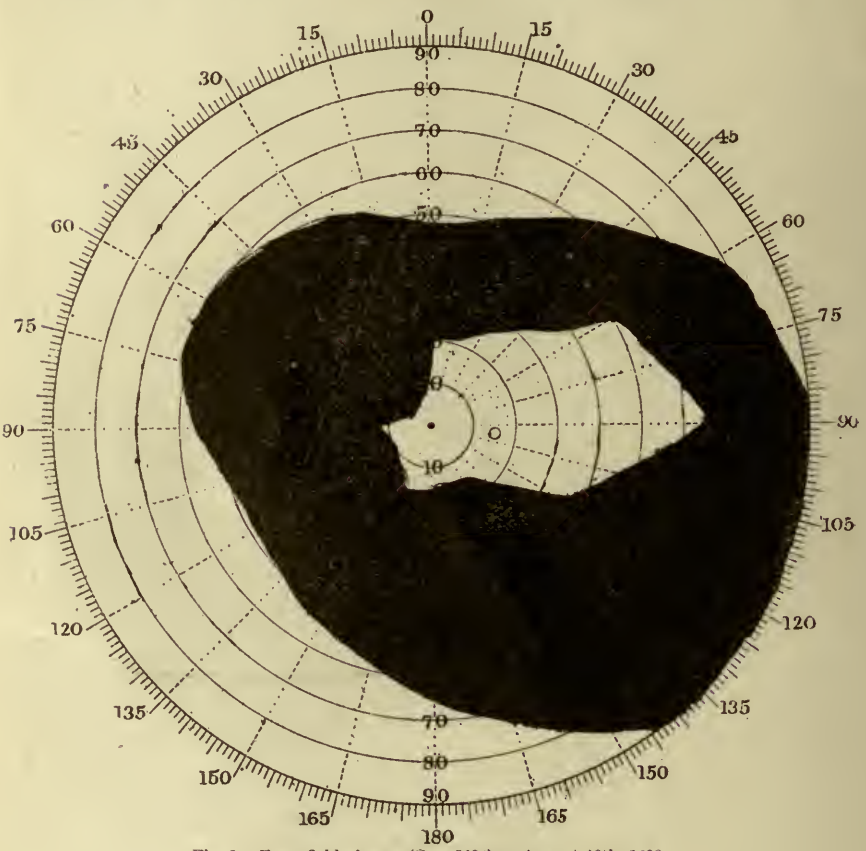


Fig. 2.—Form-field of same (Case 529s) on August 26th, 1898.

succeeded in allaying the pain and sensitiveness, but not the tension, until in about a month after the first visit I was permitted to institute treatment by massage. This soon brought down the tension to normal or occasionally slightly above. All symptoms of pain, etc., have disappeared. The massage is continued every day. The eye is blind and without retinal reflex. As a prophylactic measure I prescribed correcting lenses for the healthy left eye, the distance refractive error being + S. 2.50 D. + C. 0.50, ax. 45°. It would be interesting to know what it was in the ruined eye. .

Case 5498.—On January 21st, 1899, a woman of fifty-nine consulted me, who had been under the care of different oculists during the last six years for repeated attacks of glaucoma. She had refused to accept their advice as to the necessity of an operation. Her daughter told me that her mother had been subject to "dizzy spells" in which she fell to the floor, but without convulsions or biting of the tongue. I found the tension of the right eye normal, the media clear, some glaucomatous cupping, and a natural visual acuity of 20/200, not improvable by glasses. I tried vainly

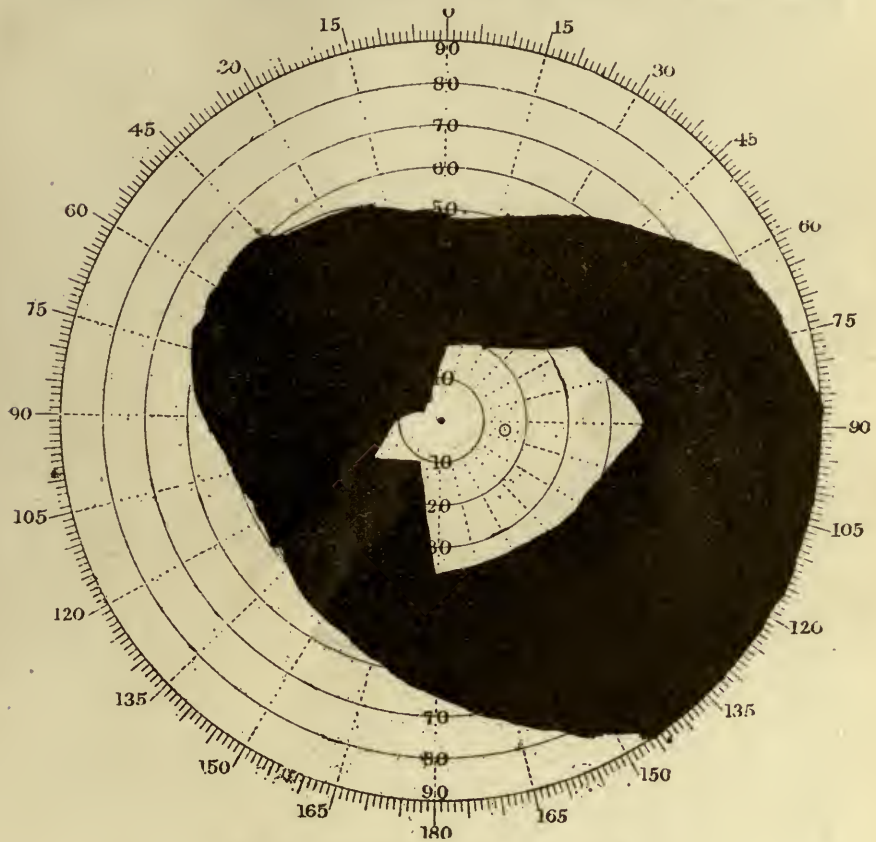


Fig. 3.—Form-field (Case 5298) on July 17th, 1899.

to find any lenses that would give increased visual acuity, so noting it on my case records. This is emphasized and to be remembered. The tension of the left eye was estimated as between + 1 and + 2, and the vision reduced to finger-counting only. The disc was typically cupped. I at once instituted massage of *both* eyes, carrying it out myself at first, and teaching the daughter how to do it. Two days after the first visit the patient returned with the tension "hardly above normal," and improved vision. I

again attacked the refractive error and to my astonishment immediately secured the following result:

R. E. + S. 2.75 = 20/40
L. E. + S. 2.00 + C. 1.00 ax. 150° = 20/30

With these and appropriate reading glasses the woman for a while went about in a sort of dazed amazement at her ability to see objects so plainly. When the glasses had been fitted I ordered the massage to be discontinued. Up to the present time the visual acuteness remains 20/30, and the tension normal, with no treatment whatever except the glasses.

Case 5578 was that of a man of forty who came to me April 6th, 1899, giving a history of glaucoma treated at a hospital and also by a physician at his private office during the past year. During this time the instillation of eserin had been kept up daily. The only evidence I found of the truth of the diagnosis was the cupped disc of the right eye. At the first visit there was no increased tension and the vision and fields were normal. I found his glasses did not correct his refractive error, and I was so convinced that this refractive error was the sole cause of his past attacks of glaucoma that I had the audacity to use a mydriatic and refract his eyes, finding:

R. + C. 1.12 D. ax. 180° = 20/20 +
L. + S. 0.50 + C. 0.25 ax. 135° = 20/20/ +
Exophoria 2°. Hyperphoria 1°.

There was no bad result from the mydriatic; the eserin was discontinued, proper glasses were prescribed, no massage or other treatment whatsoever was ordered, and since then there has been no trouble as regards the eyes; the man works every day as a clerk.

Case 5326.—A woman of fifty-two came to me September 1st, 1898, having had headaches from childhood. She first began noticing blue rings about lights about three years ago. Vision had been growing dim for three months. For nine months there had been great pain in the eyes. V. = 20/50 + B. E. Tn., = R. + 1, L. + 2. The corneas were insensitive, the anterior chambers shallow, the pupils almost immobile, but undersized rather than dilated. The discs and funduses were too ill-defined to describe. Massage was at once ordered and the next day the tension was only slightly above normal in the left eye. The following refractive error was found:

R. − Sp. 0.25 − Cyl. 0.50 ax. 90 = 20/40 +
L. − Sp. 0.50 − Cyl. 0.37 ax. 180 = 20/50

Presbyopic glasses only were ordered, eserin advised in case of need or emergency, and the daughter was carefully instructed in the method of carrying out massage. Several most encouraging letters were received during the next six months, and encouraged by these

eserin was ordered to be discontinued. On September 1st, 1899, my assistant, Dr. Murphy, on a visit to the Catskills, called upon this patient, and writes that the tension in each eye is absolutely normal, and that massage is kept up daily without eserin. Only since this report of Dr. Murphy have I ventured to include this case-history in the present report.

Besides these cases I have had a number of others, but in none has there been failure or, indeed, any results that disprove the theory that glaucoma may be caused by eye-strain and that it may be cured by massage, plus the relief of eye strain. Some have been doubtful or non-reporting cases, and others of patients living at a great distance, etc.

A fact of great significance seems to me the following: In all cases of long standing in which re-refraction has been possible there has been a decrease of the myopia or an increase of the hyperopia. If this should prove true in a sufficiently large number of cases it would show that the pathologic elongation of the eyeball by increased tension is relieved by the means described and that the thoroughness and permanency of the cure is manifested by the reparative shrinking.

To Schoen* we are undoubtedly indebted for the theory that eye-strain may be a prolific source of glaucoma. The ophthalmic world preferred to ignore, as it often does, the truth that does not suit its Zeitgeist. If it be a truth the ignoring can be only temporary, though the fact is not flattering to the acumen of the ignorers. I believed that Schoen's contention is essentially true, but it cannot be proved true by the sorry art that passes for refraction in much of the over-sea world. No better proof of this could be found than in the slighting allusions to the theory of modern monographs upon glaucoma. Not only is Schoen not mentioned, but the very terms used in speaking of the suggestion make an American oculist smile derisively. With them it is *e.g.*, only a question of hypermetropia and myopia. Not an allusion, not a hint is given as to astigmatism, anisometropia, or muscle-imbalance, and these are the causes of eye-strain. Can there be a more fundamental law in pathogenesis than that abnormal function begets disease? Morbid function sufficiently long-continued inevitably ends in morbid organic change. In pathology, the primal command is to seek for the ultimate, not the secondary causes. Etiology and prophylaxis are the two greatest medical words. No man of sense, at the present time, would say that eye-strain is the sole cause of glaucoma and cataract, nor would he deny that other causes may be operative, but to delay any longer the general acknowledgment of eye-strain as a subtle, far-reaching, and potent cause of ocular and systemic disease, and to ignore this in practice, is a sin not only against science but against humanity. I believe that a vast majority of the cases of glaucoma and cataract are preventable. I have never

* "Die Functionskrankheiten des Anges. Ursache und Verhütung," etc (1893). De Schweinitz assents to the theory (as to glaucoma) in a somewhat modified form.

seen these diseases arise in eyes cared for by a skilled and conscientious refractionist prior to and during the cataract and glaucoma age. But these results of eye-strain will not be found by those who deny the existence of the strain, often because they are too proud or too unskilled, or too inattentive to make the all-necessary diagnosis.

As to the efficacy of massage to lesson glaucomatous tension there can not be the slightest doubt in the mind of an observant person if he will make the trial. Of course the measure will not undo the effects of inflammatory and atrophic changes induced by high or long-continued excess of tension, and the permanency of reduced or normal tension gained by massage will depend upon the extent of damage done by the disease. As several of my cases suggest, when the damage is still mostly functional, permanent cure may be expected by massage and proper glasses immediately prescribed. When great organic damage has been done and the permanent amblyopia of atrophied tissues induced, spectacles are of no use. But even then routine massage may keep the eye quiet and prevent enucleation.

The technic of massage as I advise is simple, but requires delicacy of touch and intelligence on the part of those who carry it out. If the patient have these qualities she may be instructed in the art. If not, some friend or professional nurse must be taught. The soft parts of the ends of the fingers or thumbs are used, and through the closed lids. I begin with alternate palpation (called *taxis* by Dr. Richey, of Washington, D.C., who reports his results by the method in *Annals of Ophthalmology*, October, 1896) by two fingers exactly as in estimating tension, but much more slowly. All pressures and movements should begin and proceed to the extreme, very slowly and softly; the release or lessening of pressure may be a little more quick, but never sudden. The depth of the denting, or the force exerted will depend on the hardness of the globe. In high tensions greater pressures are safe. When the tension under massage approaches the normal, as it will do, the force exerted will be lessened to that which would produce clear discomfort if one's own or the normal eye were pressed. The patient's judgment of the matter must be consulted and will not be far wrong—an added reason for making the patient the operator when the intelligence and self-control will warrant.

Palpation should be through the upper lid with the eyeball in the positions of extreme adduction, normal forward-looking, extreme abduction, and extreme depression. In extreme elevation the lower lid is used. Each position must be ordered systematically while massage is being carried on; (the position of the other eye may be observed as a guide); in this way fully three-fourths of the globe is operated upon. The length of the sitting depends upon the time required to bring about normal tension, which is usually from three to five minutes. Sometimes normal tension will not follow so soon. I have yet to see any considerable bad results

such as conjunctival hyperemia, although patients have sometimes alluded to the fact that there was some irritation or discomfort following long-continued or too rough manipulations. I alternate the alternate palpation with two fingers with shorter rolling or rubbing movements (effleurage) carrying the lid so far as easily movable with and beneath the finger around the equatorial regions of the globe.

I suppose that by means of these kinds of massage the venous and lymph stasis is broken up and the fluids of the eye put in better circulation and outflow. It is also doubtless true that there is a direct benefit to the retinal and optic-nerve tissues, not only by relieving them of all kinds of pressure, but in subjecting the lamed and partially paralyzed fibres to variations of pressure, etc.

I would not, of course, be understood as advocating the disuse of iridectomy in certain cases, nor of the other measures that empirically have been demonstrated of service. The disease is such a terrible one, and we are often so helpless before it, even iridectomy often proving ineffectual, that every means of promise should be eagerly seized upon. But hundreds of cases of glaucoma occur in places where the skilled specialist cannot be called upon, and in such instances, as well as in those in which the patients refuse operation, I believe massage may be of great service, and especially if seen early. It is a therapeutic measure that at least is always literally at hand, either for patient or the general physician. In many cases it may prevent enucleation, as it did in one of those I have reported. As an immediate prophylactic measure in acute and subacute attacks it is invaluable But I am just as sure that the fundamental cause of the disease in a large majority of, if not in all cases, is long-continued pre-existing eye-strain, spurred beyond resistance by presbyopia. Hence the primal prophylactic as well as the therapeutic measure is relief of eye-strain, not by antediluvian or optician methods of refraction, but by skill and exactness that are at least one one-hundredth as accurate as that men use to calculate eclipses, or test a chemic reaction.

TUBERCULOSIS AND INSURANCE.*

BY JOHN HUNTER, M.D., TORONTO.

FEW questions are more perplexing to the medical director of an insurance company than the presence, to a limited extent, of tuberculosis in the family history of healthy applicants, and certainly nothing can seem more unfair to the latter, or be more exasperating to the physicians who make the examinations and recommend these risks, than their rejection.

Of course, there can be no two opinions about its being the first

* Read at the meeting of the Canadian Medical Association, Toronto, 1899.

and most imperative duty of an insurance company to safeguard most scrupulously the claims of the policy-holders, and no one need be so ungenerous as to deny the company the exercise of such business precautions as are necessary to secure fair dividends to the stockholders. However, the granting of these privileges to the company imposes upon it the duty of rendering the full measure of justice to the interests of the applicants.

It may also be stated in this connection that whilst it is the duty of the physicians who make the examinations to furnish the medical director with full, accurate and honest reports in all cases in which there is a history of tuberculosis, it is just as fully the duty of the latter to assure himself that these applicants receive the full benefit of the accredited knowledge and experience of to-day. For the assuming of any mere hypothetical principle alone, regarding the influence of hereditary tendency in tuberculosis, is not sufficient to justify him in giving a decision that may be very unfair to the applicant, and that may reflect very unfavorably on the professional standing, if not also upon the uprightness, of the local examiner.

Enough has been said to indicate the purport of this paper, viz., to invite a discussion that may help in some measure, at least, to define more clearly—if I may be allowed to use the somewhat expressive phrase—"where we are at," in reference to the relationship between tuberculosis and insurance.

Assuming that it is the province of an insurance company to grant the ordinary life policy to any applicant who should naturally live out the period of expectancy, to what degree then does the presence of tuberculosis in the individual or family history justify his rejection?

The limitations of our knowledge of this disease, and of our experience with its mortality in life insurance probably warrant the rejection of the following classes: (1) The tuberculous subject; (2) the descendants, say, under thirty years of age (this age being chosen to allow time for full physical development and the formation of stable habits of life), of a tuberculous parent, especially the maternal one; and (3) all the second class, irrespective of age, who have inherited or acquired any physical defect that would predispose to disease.

Eliminating these classes, we have left those over thirty years of age, who, apart from the incident that one parent had tuberculosis, are physically up to the standard of first-class risks; and the members of families, with healthy parentage, but of whom 15 or 20 per cent. became tuberculous after thirty years of age.

The question of admitting applicants from either of these classes under the terms of the ordinary life policy, calls for some discussion of the etiology, propagation, prophylaxis and curability of tuberculosis.

In regard to etiology the isolation of a specific micro-organism enables us to accurately define the disease as an infectious and contagious one, due to the presence of the bacillus tuberculosis.

In reference to propagation, we have the exciting and predisposing factors. The former is directly attributable to the entrance of the specific bacilli into, and their destructive effects upon, the tissues.

The latter or predisposing causes may be considered for the sake of brevity under the following heads: (1) Environments; (2) physical conditions, either hereditary or acquired, that predispose to disease; and (3) hereditary tendencies.

Under environments may be included everything prejudicial to health, whether in climate, food, habits, sanitation or vocation. We pass over abnormal physical conditions, since the two classes under consideration are assumed to be up to the normal standard of physical perfection, and proceed to discuss the problem of hereditary tendencies.

It is true that the doctrine of the transmission of hereditary tendencies predisposing to tuberculosis has come down through the medical literature of all the centuries, and has received the endorsation of the masters in every age. However, with this doctrine, as with every other, neither the veneration due to its hoary age, nor the influence of its associations, oblige us to accept it, insomuch as we know now how very imperfect was the knowledge on which it was founded and promulgated.

The direct transmission of the bacilli through parental channels has been shown by pathological research to be of such rare occurrence, and by experimental efforts to be so difficult of accomplishment that practically it may be set aside as being of no importance as a means of transmitting this disease. In military parlance it can be said that pathology and experiment have so impaired the bulwark of direct transmission that we have been obliged to fall back and construct, as best we can, a hypothetical sand-bank, consisting of what is vaguely called hereditary soil, tubercular diathesis, vulnerability of tissue, etc.

A glance at the reports from the recent Congress on Tuberculosis, held in Berlin, warns us that already sceptical hands are being laid on even the last tenet in our creed, avowing the transmission of hereditary tendencies in tuberculosis.

Professor Loeffler is reported as saying that (1) the father has no part in the transmission of this disease, and that it can only be transmitted by the mother when her organs of reproduction are infected. (2) That there is no proof of immunity from tuberculosis, nor of congenital or hereditary transmission of it. Professor Heubner stated that tuberculosis is not congenital. In eight hundred *post-mortem* examinations on subjects under one year old tubercle was not found, and that infantile tuberculosis was in the majority of cases due to infection from parents. Sir Herbert Maxwell and Dr. Rye Smith, commissioners from Imperial Government, in their report to Parliament state the following: (1) Tuberculosis is caused by the bacillus tuberculosis. (2) Tuberculosis, as a condition directly transmitted, is extremely rare. (3) Little or no risk

of direct infection in pulmonary tuberculosis. Professor Friedeberg calls it the workingman's disease, as 50 per cent. of the mortality in their clubs is due to tuberculosis.

At a meeting of the medical directors of the leading British insurance companies, held in February of this year, the speakers, whilst asserting more or less strongly their faith in the doctrine of hereditary tendency in tuberculosis, interspersed their discussions freely with such statements as the following: "It has practically escaped notice that the strongest arguments used to support the theory of family tendency to tuberculosis tell with, at least, equal force in favor of the view that infection is the cause of the incidence and spread of tuberculosis. The close, intimate circumstances of family life, the infection of the family home, and the total disregard of precautionary measures in the family life, because of ignorance—these facts, I venture to say, play a much larger part in the tragedy of family liability to tuberculosis than does hereditary tendency to that disease. But these facts have been altogether ignored in estimating the value of family tendency to tuberculosis in its bearing on life assurance." "Every gentleman in this room knows when a man is in a good state of health; if he is plump and round, and his pulse regular, and all his internal organs are healthy, it matters little what his family history has been."

Dr. Marsh, medical director of the Mutual Life Assurance, of New York, says: "In deciding upon the elegibility of an applicant for life assurance in whose case there is a suspicion of future danger from consumption, his personal condition is of first. and his family record of second, importance. Whenever he presents a robust physical appearance, with a weight, at least, equal to the standard or average, as given in our tables, he may be accepted, notwithstanding any taint in the record of his family. In our experience such persons have a small liability to consumption, although not protected from it."

The same trend of opinion can be found in all the most recent works on "The Practice of Medicine." The authors, although devoting some attention to the theory of heredity, lay special emphasis on the infectious character of tuberculosis.

Time will only permit a brief reference to one or two quotations from statistics. The report of the British Registrar-General gives as the mean annual mortality from tuberculosis per million living at all ages, during the period 1851-80: Males under fifteen, 2,082; over sixty-five, 2,842. Here we have a larger number of deaths from tuberculosis during the last fifteen years of life than during the first; or, in other words, the grandfathers seem more susceptible to tuberculosis than the grandchildren. This, since pathology and statistics alike show that childhood possesses no immunity from tuberculosis, appears very remarkable, if heredity be a strong factor in predisposing to this disease, to find in that part of the stream of life nearest the diseased fountain head, there is less danger to the young voyageur than there is in that portion

left after it has been meandering on for threescore years, and has turned his face, now pale and wan, toward the setting sun. Surely, owing to the innumerable changes that take place in the tissues, hereditary tendencies must be very attenuated factors in these old people.

In an address delivered by Dr. Bryce in the city, some few months ago, I think he was reported as saying, that about 80 per cent. of the deaths from tuberculosis, in Toronto, occurred amongst the working classes, or those following special trades. Now, were heredity a potent factor, should not the death rate from this disease be much more evenly distributed over the whole population?

I will not detain you any longer with quotations from statistics, for doubtless this phase of the question will be exhaustively dealt with in the discussion that is to follow, but will proceed to notice, though very briefly, the problems of prophylaxis and curability.

The infectious character of this disease is now so firmly established, it naturally follows that prophylaxis consists in avoiding sources of infection, and the use of every available means of destroying the bacilli and its products. An article in the August number of the *Canadian Practitioner* shows that the acts of coughing, speaking and laughing are sufficient to disseminate the germs pretty widely; hence the necessity for personal cleanliness, antiseptic sprays and inhalations, daily baths, well-ventilated, sunny rooms, wholesome food, healthy vocation, temperate habits, and out-door life. There is one very important factor in prophylaxis that, I think, receives altogether too little attention, that is the control, at least, to a very much greater extent, of sexual indulgence. The frequency with which tuberculosis is found amongst those who resort to immoral practices, and the enormous increase in the mortality during the most active period of sexual life amongst married people, are certainly sufficiently ominous to warrant us in advising these people to keep their sexual desires under the most rigid subjugation.

A line or two in reference to the curability of tuberculosis. The records of *post-mortem* examinations show that the tubercular process must have become quiescent in quite a large proportion of those who had been infected at some period during life. The statistics of cures now effected at the different sanitoria give a percentage all the way up to seventy. At a meeting recently held in Nottingham, Dr. Ransom gave a report of 1,541 cases. Seventy-one per cent. were restored to work again; and in less than 7 per cent. did the disease advance. I think I can safely state that it is the personal experience of every physician in this room to have a fairly large percentage of his tubercular cases restored to average good health. In the standing armies there has been a very gratifying decline in the mortality during recent years.

With more scientific knowledge regarding etiology, prophylaxis and treatment; the more general co-operation of the public in preventing the spread of contagion; the easy access to, and the home-

like comforts of, our numerous health resorts; the establishment of a sufficient number of properly constructed and well-managed sanitoria—with all these we can look forward most hopefully for a very great reduction in the mortality from tuberculosis.

In conclusion, although the purport and limitations of this paper have only permitted of the briefest possible reference to some phases of this very important question, yet I think enough has been said to show that the trend of medical opinion is now to attach so much importance to the infectious character of tuberculosis, and so little to its hereditary tendency, that a medical director would be fully justified in accepting applicants from either of the two classes under consideration as ordinary life risks.

I would like to add that the time and need have fully come for the appointment of a medical commission, tribunal, or court, whatever it may be called, to whom a rejected applicant could appeal from the decision of a medical director.

FLOATING KIDNEY SIMULATING DISEASES OF THE GENITAL ORGANS IN WOMEN.

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By the division of labor and the increased attention which each branch of our art thereby receives, mistakes both in diagnosis and treatment are growing fewer year by year. As far as diseases of women are concerned the writer believes that 95 per cent. of those who submit to treatment are entirely cured; and even this small percentage of failures would be still further reduced if we could eliminate all errors of diagnosis. Floating kidney is one of those diseases which give rise to so many symptoms which we have been accustomed to attribute solely to the genital organs, that it is no wonder that its presence has often not been recognized, and that patients suffering from it after having undergone one or more gynecological operations have continued to suffer and complain as much as ever of those reflex disturbances which we thought depended entirely upon a laceration or displacement of the uterus or upon some disease of the ovaries or tubes. Most of the failures to cure women by gynecological treatment are due to defective diagnosis by the inexperienced or careless, the result being operations for one disease when there are other and more important ones present. Many women have been operated upon for lacerated cervix only, and been promised a cure which they did not obtain because they had besides endometritis, retroversion with fixation,

pus tubes and ovaries, appendicitis and lacerated perineum, and should have had not only an amputation of the cervix, but also a dilatation and curetting, repair of the perineum, removal of tubes and ovaries and vermiform appendix, and ventrofixation.

Other failures are due to incompetent operating, as when the operator fails to follow Emmet's expressed directions to remove all the scar tissue before sewing up a lacerated cervix. When a complete and thorough diagnosis has been made and all the abnormal conditions present have been remedied by skilful operations and other treatment, the result is satisfactory in almost a hundred per cent. of the cases. There are some failures which occur in the practice of the most experienced specialists, which, however, are none the less humiliating to him and disappointing to the patient and her family physician. The two most important causes of these are appendicitis and floating kidney, but the latter topic will be quite sufficient to occupy the time for one paper. We are indebted to Hahn, Landau, Lindner, McCosh, Keen, Senator, Schmidt, and more especially to Noble, of Philadelphia, and Edebohls, of New York, for having brought the question so forcibly before us. As the writer has met with quite a number of these cases in which the displaced kidney produced all the symptoms of diseases of the genital organs while the latter were perfectly healthy, or in which well-defined disease of the uterus and appendages coexisted with displaced kidney, so that the patient continued to suffer as much as ever even after the thorough removal or repair of the affected genital organs, it may be interesting to study together this rather obscure condition so that we may all more readily recognize it when present, and thus avoid disappointment in the cases referred to. A few words first as to its cause. This is not yet certainly known. It is much more frequently met with in women than in men, having been found as often as ninety times in five hundred gynecological cases by Lindner, while Noble has found it in about one in every four. It occurs much more often in the right side than in the left, owing to the right lobe of the liver being larger and more apt to push it down; although a few cases have been recorded in which, the symptoms having continued after the right kidney had been stitched up, a further examination revealed a displacement of the left kidney, the fixation of which was followed by a complete cure. In a few cases also the left kidney alone had been found to be movable. The present paper does not deal with congenital displacement, because in these cases the kidney is not movable but firmly placed in its abnormal position. It is generally thought that a tight corset or rather tight lacing is a cause, and although Noble and Edebohls say that a rather tight corset keeps the kidney up, the writer has had an experience to the contrary. In this case, a lady with retroversion of the uterus and a tender prolapsed ovary and a floating kidney, while on a journey around the world was taken so ill in Montreal that she could go no farther. As she declined to be operated upon so far away from home, she was treated so as to reduce the excessive

inflammation in the pelvis and to increase her fat; and after a month she was able to get up. She was doing nicely until she was given permission to put on her corsets and go to a public ball. As she had gained a little in size and her clothing had been made to fit her like a glove, her corsets had to be laced a little in order to get her dress on. Although she only had them on for a few hours all her symptoms were much aggravated, and it took her nearly a month to recover the lost ground. She was finally sent home, with a note to Mr. Greig Smith who performed nephrorrhaphy and ventrofixation, but was not allowed to remove the ovary, with the result that while very much better she is not quite cured.

All are agreed upon three points in the causation: first, anything which causes a sudden and marked loss of fat in the perirenal cellular tissue; second, frequent pregnancies, which cause relaxation of the abdominal wall and lessening of the intra-abdominal pressure; and third, making great efforts at lifting or sudden falls dislocating the kidney. In most of the writer's cases there was a coexisting retroversion of the uterus, which the patients dated from a fall off a chair on which they were standing, or from a strain while attempting to lift a helpless patient.

The most interesting question, however, is the symptomatology. If this were better known we would not be puzzled so much when we find women whom we have put into good condition gynecologically, persisting in saying that they are still suffering from the same gynecological symptoms. The fact is that the kidney is so intimately connected with the great sympathetic system in the abdomen, that its displacement and the consequent dragging on the nerves whenever the woman assumes the erect posture, causes very much the same symptoms as does the irritation of the sympathetic from the presence of scar tissue in the angle of a lacerated cervix, its compression by a swollen and prolapsed ovary, or pressure from a retroverted uterus. The symptoms in their order of frequency and importance have been, in the writer's experience: first, disorders of digestion, accompanied with pain not only in the right side from the dragging, but more especially in the left side, which may be described as a cardialgia or a gastrodynia. Some of the patients attributed their pain only to their heart, having also shortness of breath and a smothering feeling. Many of them complained all over the bowels. Two, who first consulted the writer since this paper was begun, said they had a fluttering feeling in the abdomen or as if the bowels were turning over and over. This dyspepsia resembles that due to lacerated cervix, for no matter what you do for it the benefit will only be temporary and the patient will soon complain as much as ever. She may get relief from it for several months during the latter half of pregnancy when the uterus pushes up the kidney with the other abdominal contents; or if a gynecological operation or a broken leg keeps her in bed for several weeks the kidney slips up into place and she feels well. But as soon as she gets up, her dyspeptic pains, the anorexia and gaseous eructations,

the constipation and foul breath all return. Some have thought that these dyspeptic symptoms were due to the pressure of the floating kidney on the duodenum, but they are present just the same when the left kidney alone is displaced, which, of course, cannot reach the duodenum.

The second symptom is general nervousness. Naturally sweet-tempered women become cross and irritable. They cannot sleep on their left side, and do not sleep well even on their backs or right sides. As long as they are sitting or standing they cannot remain still, but are in a constant state of fidgets. It may be noted here that this nervousness, like that due to a lacerated cervix, does not disappear immediately after the cause is removed; the nervous system seems to acquire a disordered habit. Third: palpitation of the heart, which, coupled with the pain over the cardiac end of the stomach, leads the patient to have the firm conviction that she has heart disease. Both the rapid pulse and the pain disappear almost immediately after nephrorrhaphy. It should be easy for the gynecologist, at least, if not for all practitioners, to understand why a floating kidney should cause these symptoms in the circulatory and nervous systems, for we see exactly the same phenomena brought about by a lacerated cervix. There a diseased condition of less than a square inch of tissue will cause the most marked disturbances in distant parts of the body—headaches, disorders of vision, loss of memory, palpitation of the heart, obstinate constipation and dyspepsia. And when we remember that the great sympathetic nerve and the termination of the right pneumogastric go to form the solar plexus, which supplies all the abdominal visceræ; that these two nerves supply the heart, and that the sympathetic controls the circulation of the brain, it is not difficult to understand why the irritation of a floating kidney, pulling and dragging at the solar plexus, should produce all these reflex disturbances in distant organs. As you know, the solar plexus is situated behind the stomach and in front of the aorta and crura of the diaphragm. It surrounds the celiac axis and root of the superior mesenteric artery, extending downward as low as the pancreas and outward to the suprarenal capsules.

Then we find symptoms directly due to the displacement of the kidney, such as pain in the back, partly caused by the dragging, and partly due to the intermittent hydronephrosis, caused by the kinking and consequent blocking of the ureter. In such cases the woman passes very little water during the day, and the pain increases steadily until she goes to bed at night, when in a few minutes after having emptied her bladder, she will have to get up again, and she will then pass a large quantity of urine, and experience great relief. In other words, she has an intermittent hydronephrosis. In one of the writer's cases the right kidney was found in the left iliac fossa, and as the woman was extremely thin the kidney could not only be felt, but could be seen moving anywhere in the abdomen to which it was pushed. In another case the dis-

tended kidney attained the size and appearance of an ovarian cyst, completely filling the abdomen, and was removed by the writer by abdominal section with complete success. Although marked emaciation is not a symptom, but is rather a cause, of floating kidney, yet it is so constantly coexistent that it may almost be regarded as one. Certainly when a woman complains of the reflex disturbances above mentioned, and is, at the same time, very emaciated, the idea of floating kidney should at once come to mind.

Diagnosis.—When the possibility of the presence of floating kidney has even been thought of the diagnosis is comparatively easy. The difficulty so far has been that the symptoms have been attributed to some other cause, which has generally been supposed to be in the generative organs. And these latter have been subjected to treatment, more or less severe, which they did not require or deserve. In one of the writer's cases the patient had had curetting and repair of the cervix, and removal of the ovaries, without in the least relieving the pain, when, on making a careful search, the right kidney was found to be prolapsed. This was stitched up, and the patient was completely cured. It is especially important to remember that all the reflex disturbances may be due, wholly or in part, to floating kidney. When the latter can be distinctly felt wandering about the abdomen, the diagnosis presents no difficulty. But when it has only moved two or three inches away from its proper place it is not quite so easy to decide. Even such an able diagnostician as Lawson Tait diagnosed a case as one of distended bladder, and operated for it in the dorsal position. He found the gall-bladder and adjacent tissues healthy and the kidney in its place. He thereupon came to the conclusion that the tumor which he and several others had distinctly felt, was an hysterical tumor. As the patient continued to complain, another operator was called in, who, on examining in the erect posture, found a movable kidney, and completely cured the patient's long suffering by performing nephrorrhaphy.

If we make it a rule to examine for floating kidney while the patient is standing up and leaning forward with her hand upon a chair, so as to relax the abdominal muscles, while the examiner sits on her right side and a little behind her, we will rarely fail to dislodge it, if it is movable. The fingers of the left hand are firmly pressed into the hollow of the back, and the fingers of the right hand are pressed into the abdomen under the ribs in front until they meet upon the kidney if slightly displaced, or above it if displaced very considerably. Edebohls says he has always succeeded by directing the patient to sit upon the edge of a chair, with the body inclined forward and the hands resting upon the knees. In some cases the writer has found a rigidity of the abdominal muscles, which gave very much the same sensation as a floating kidney; while in others the rigidity absolutely prevented anything being felt in the abdomen. In these cases a little anesthetic will enable one to clear up all doubt. The only two conditions with

which we could confound movable kidney are a distended gall-bladder and cancer of the pylorus. The writer was called to a consultation a year ago with two confreres who had diagnosed, the one cancer of the stomach, and the other distended gall-bladder, while the writer diagnosed floating kidney. She had pain, marked dyspeptic symptoms, and a bad color; but she had no lump or tumor anywhere while lying down, neither at the pylorus nor under the liver. But on standing up, a typical kidney-shaped tumor made its appearance, and could be felt about five inches below its proper place.

In another case, which proved to be a case of cancer of the pylorus, the tumor was not unlike the size and shape of the kidney. It had great mobility, but it could not be pushed up under the left ribs.

Treatment.—As marked emaciation seems to produce floating kidney, is the converse true that marked fattening will cure it? Certainly marked improvement of all the symptoms generally appears if the patient can increase the deposit of fat in the abdomen. As we have already said, the Weir-Mitchell treatment of rest and forced feeding has been followed by great benefit; and a few cases are on record of apparent cure of the disease without treatment, simply because an improvement in nutrition took place. In several of the writer's cases all the symptoms disappeared, and the patient was perfectly well as long as she laid in bed on her back. If the patient can afford it, this treatment is worth trying. The majority of patients, however, want a more rapid relief, if not cure, and for them there are two methods of treatment. The one which most of them prefer, although it is not the most satisfactory one, is to support the kidney by some form of bandage or pad. If the kidney is only an inch or two out of place, a well-fitting corset will push everything above the waist-line up and consequently support the kidney. But if the kidney is below the waist-line, then the corset will push it down, as happened to one of the writer's patients. The truss-makers manufacture a pad and bandage for floating kidney, which the writer has tried in two cases without benefit. In fact, it made the patients worse, for it did not keep the kidney up, and when the kidney slipped past the pad the latter prevented the kidney from going up again. The only good that we may hope to accomplish with a pad and bandage is by crowding up the whole of the abdominal contents. For this purpose a round cushion should be made of chamois leather, and covered with a movable cotton cover, to be frequently changed. This cushion should be filled with curled hair for the sake of elasticity and lightness; and, indeed, for that matter, an air cushion of rubber might do as well, and it should be thick enough to give the woman when it is applied a distinct roundness or plumpness of the abdomen. It should be put on while she is lying on her back, and held in place firmly by means of a broad flannel or woven elastic bandage, so as to keep it evenly pushed into the abdomen. When

the patient stands erect all the abdominal contents will be supported, and the patient will experience great comfort immediately. A patient who consulted the writer while this paper was being prepared, has been fitted with such a pad and bandage, and experiences such relief from it that she will not entertain the idea of an operation for the kidney; but as she has a retroverted and fixed uterus as well, she will probably have to be operated on for that sooner or later, and it is better while we are doing any operations which may be necessary on the pelvic organs to stitch up the kidney at the same time.

In those cases in which the above methods of treatment are impracticable or unsuccessful, we must fall back upon nephrorrhaphy, or stitching the kidney to the back, which, as a rule, gives very satisfactory results. The patient is placed upon the face, while a round billet of wood or hard cushion, about eight inches in diameter and a foot long, is put under the abdomen, so as to push the kidney up towards the back. This does not interfere with the anesthetizing, but, on the contrary, leaves the movements of the chest free. An incision is made about four inches long, from the last rib to the crest of the ilium, through the skin, superficial and deep fascia along the outer border of the quadratus lumborum, and then through the conjoined tendon of the transversalis and internal oblique. We now come upon the loose fat surrounding the kidney, and this is picked up preferably with the fingers and opened, taking care not to open the peritoneal cavity. This happened once to the writer, but it was immediately closed and did no harm. It will now be easy to palpate the kidney through the wound, when it is grasped with a pair of bullet forceps or vulsellum, and brought up to, or better still, out of the wound. The convex border of the capsule is then incised for its whole length and turned aside, so as to leave a strip of kidney exposed to the width of half an inch. This is important, because failures have occurred from defective precautions to obtain a long and wide line of adhesions. The kidney should be fixed by not less than five silkworm gut stitches, passing through the conjoined fascia and entering a quarter of an inch into the kidney substance. Strange to say, this does not cause any hematuria as we might expect. When all the stitches are passed the kidney is dropped back into the abdomen, the space dried out, and the stitches tied not too lightly, and they are cut off short. During the last few operations the writer has not employed drainage, and the cases did equally well with those in whom he employed gauze, silkworm gut, or rubber drainage. Some claim that packing around the kidney with a strip of gauze increases the inflammation and exudation, and gives better adhesions; but, on the other hand, it prevents ordinary union, which is always desirable from a surgical standpoint when possible. Some operators, dreading that the silkworm gut sutures might cause suppuration, have attempted to anchor the kidney by temporary sutures going through the skin and muscles, and which they remove a

week or two later. But by this time the adhesions are not strong enough of themselves to hold up the kidney, which is then liable to fall again. Other operators have used catgut or kangaroo tendon for the same reason, but for the same reason are to be condemned. The silkworm gut stitches, if well sterilized and not tied too tightly, only suppurate in about 5 per cent. of the cases, and then can be easily hooked up with a crochet needle and removed. There is no objection to a little irritation of the cellular tissue, as mild inflammation of it causes the kidney to adhere more firmly. Some of the writer's patients have complained of soreness in the wound and on the hip-bone for a month or two, but eventually this disappears. It is important to remedy displacements of the uterus or of the other kidney at the same time, in order to obtain perfect results.

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OBSERVATIONS ON THE RELATION OF THE UTERUS TO THE THYROID GLAND.*

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For the past nine years or so I have been devoting some special attention to the treatment of diseases of the thyroid gland, more particularly by means of the use of electricity in various forms. The results have been laid before the Canadian Medical Association on two previous occasions, and also before other medical societies.

The present brief contribution is of a somewhat different character, namely, the relation of the uterus, or more properly speaking, the female reproductive organs to the thyroid gland.

A very cursory glance at current medical literature would suffice to dispel effectually any claim to originality in this theme, but it will also disclose a certain lack of unanimity on the part of our authorities.

For instance, the only reference in Flint's "Human Physiology" to this subject of relation to or sympathy with the thyroid is: "An instance is quoted by Longet of periodical enlargement of the gland in a female during menstruation, but there is no evidence that this is of constant occurrence."

In Walsham's "Practical Surgery" there is also but brief reference, namely, under causes of goitre: "In sporadic cases, heredity, disturbance of the sexual functions and conditions producing congestions of the head and neck, are given as causes."

* Read at the Thirty-second Annual Meeting of the Canadian Medical Association in Toronto, Ont., 1899.

The only reference which I can find in Osler's "Practice of Medicine," is under myxedema proper, viz.: "Though occurring most commonly in women, it seems to have no special relation to the catamenia or to pregnancy, though the symptoms of myxedema may disappear during pregnancy or may develop post partum." No allusion is made to the subject when speaking of goitre.

On the other hand, Hirst's "System of Obstetrics" clearly recognizes the relationship existing between the uterus and the thyroid, and I may therefore be excused for quoting rather freely from this work, as follows: "The hypertrophy of the thyroid gland, and consequent fulness of the neck, apart from any local disease or endemic influence during pregnancy, is such a sensible and frequent phenomenon that the ancients recognized its occurrence. Thus we see the Venus of Milo, a girl on the verge of womanhood, with a slender delicate throat, due to the rudimentary state of the thyroid, in strong contrast with the Venus Callipyge, a woman in magnificent maturity, undoubtedly parous, with a broad full throat and marked thyroid development. The Latins, scarcely less critical than the Greeks, observed the same appearance. . . . The organ diminishes in size during the puerperium, but remains more voluminous than prior to pregnancy. . . . The physiological hypertrophy of the thyroid gland at puberty and during pregnancy has been already mentioned. The exaggeration of this normal enlargement to such a degree as to be productive of serious symptoms is not an infrequent disorder of pregnancy. . . . A number of facts, fully supported by abundant clinical observations, render the theory almost certain that some necessary relation exists between pregnancy and certain cases of simple goitre. The disease is very much more common in women than in men. The intimate relation between menstruation and menstrual disorders and the thyroid is fully established.* The same connection between this gland and functional and organic disorders of the uterus and ovaries has been observed. The disease is observed much more frequently in women who have borne children than in sterile married women.† Bronchocele often makes its first appearance during pregnancy, increases rapidly in size during the period, and subsequently becomes reduced in volume. These facts indicate that whatever the true causes of simple goitre may be, pregnancy is often the actual exciting and determining cause. . . . The thyroid gland, first becoming prominent at puberty, remains stationary until pregnancy supervenes. During the first or second pregnancy the gland increases rapidly in size, but seldom giving rise to symptoms of severe dyspnea. In the interval between labor and the succeeding pregnancy the tumor is reduced in size, but remains a little larger than it was before pregnancy. . . . This process continues with each successive pregnancy, provided the woman does not succumb to the mechanical interference with respiration, until the meno-

* Lawson Tait, E. W. Jenks.

† Allen Thompson Sloan.

pause, when the tumor diminishes greatly in size or in rare cases entirely disappears."*

Turning to Mann's "System of Gynecology," we find this allusion: "*Thyroid Enlargement*—This symptom, taken as an evidence of physiological activity of the reproductive organs by the poets and physicians, as well as the common people of Rome, was even regarded by so acute an observer as Meckel (Barnes) as a repetition of the uterus in the neck. This I have repeatedly observed as an accompaniment—I cannot say positively a reflex—of uterine disease."†

Many more authors might be quoted *pro* and *con*, but the foregoing will be sufficient to establish the fact that the relationship is either not fully acknowledged by all whom we are accustomed to regard as authorities, or not thought to be of sufficient importance to dwell upon in their writings.

The observations to which I desire to direct attention are restricted to experience with about two hundred cases, and are as follows: Diseases of the thyroid gland are much more common among women than men. A direct sympathy, if nothing more, between the uterus and thyroid is manifested in many ways, so frequently in fact as to preclude the assumption of mere coincidence. Thus, before the establishment of the function of menstruation the thyroid gland is quite often found to be in a hyperemic or engorged condition. When menstruation is established this condition of engorgement usually disappears, although it may occasionally persist in a lessened degree. In the cases in which the thyroid does not resume its normal dimensions, it usually becomes more engorged before each menstrual period, receding in size upon completion of the period, or again there may be an accession in size at each period, which does not entirely disappear.

Enlargement of the thyroid, however, is not always a premonitor of approaching puberty. It is met with in children under eight years of age, and in one instance the thyroid had been prominent ever since birth.

Goitre occurring after puberty is frequently associated with amenorrhea. In one case in which both amenorrhea and goitre proved very stubborn, an infantile uterus was found. Treatment directed to the amelioration of this condition resulted in the establishment of menstruation and reduction in the size of the thyroid. In only one case has a diminution in size of a goitre during the menstrual period been noted, a parenchymatous goitre in a multipara.

When a patient with an enlarged thyroid becomes pregnant, the gland increases markedly in size with each pregnancy, to become smaller upon or shortly after delivery, although it rarely recedes to its dimensions before pregnancy.

* "American System of Obstetrics," article on Pregnancy, by William Wright Jaggard.

† "American System of Gynecology," article on the Hytero-Neuroses, by George J. Engelmann.

In many cases pregnancy is directly responsible for goitre, which makes its first appearance early after impregnation.

In several cases it has been noticed that while the thyroid gland was undergoing electrical treatment the susceptibility to impregnation has been markedly increased, and this with patients that had not been pregnant for several years.

The occurrence of the menopause is not always the signal for the recession or disappearance of a goitre; on the contrary it may increase at this period. In a few cases the goitre has not given rise to any inconvenience until the menopause. A goitre especially manifest after the climacteric should be regarded with suspicion as apt to be malignant in character.

At three periods of life has the thyroid been found most refractory to treatment: before puberty, during pregnancy and after the menopause.

This brief contribution deals with the subject in a very general manner only. No attempt has been made to burden it with figures, but I trust that enough has been shown to establish the contention. Apart from this, however, as a point of practical value the following conclusion may be drawn. In treating disease of the thyroid gland in women, it is wise to inquire into the condition and habits of the uterus, and to devote some attention to it as well as (if not indeed instead of) the thyroid. Very active measures should be omitted before puberty, during menstruation and pregnancy, while the climacteric is a time for especial suspicion.

ANTINOSINE IN THE TREATMENT OF CHRONIC ULCERS OF THE LEGS.

BY A. J. HARRINGTON, M.D., M.R.C.S., TORONTO.

CASE 1.—Woman, aged 68. Ulcer, kidney-shaped, two and a half inches long in the antero-outer surface of the left leg, one inch above the outer malleolus. This ulcer had been a source of much annoyance for twelve years, and had been healed over completely on several occasions. I advised complete rest and thought I would try antinosine on this case. I thoroughly disinfected the surface of the ulcer with 1-20 carbolic, and made linear incisions through the callous border of the ulcer all round. This relieved the engorgement of the cutaneous veins. I then thoroughly applied pure carbolic acid to the entire surface of the ulcer, and dressed it with an ointment of cocaine mur., four grains, morphia mur., two grains to the ounce of vaseline. This ointment I applied thickly on lint, over which I placed a thick layer of absorbent cotton, and bandaged the leg from the toes to the knee. I used this ointment as the ulcer was extremely painful, and it was most grateful to the patient. Next day I removed dressings and the ulcer looked clean and healthy. I made a few more incisions through the ring border

of the ulcer and dressed the sore with antinosine, over which I placed a layer of gauze, and then a thick large layer of cotton and a firm bandage as before. The ulcer was daily dressed, and improved each day with little irritation to patient. On June 12th the depressed ulcer surface was even with the surrounding skin; on the 26th there only remained a small corner of the ulcer, which broke down and was about as large as a pea. This ulcer I mopped out with pure carbolic acid, and on the 7th of July it was thoroughly healed over. I may here remark that the desiccative action of antinosine was most marked in this case, and there was very little serous exudate after the first few applications and was most soothing to the patient. This patient had had many different forms of treatment during the long time that she had been afflicted, and she says that this form of treatment is by far the finest she has ever had.

CASE 2.—This is a very interesting case. She had been informed by her former medical attendant that it would be very unwise to heal an ulcer like this, as it invariably broke out in another part of her body, and if it should so happen to break out in her brain it would cause her death!! What an axiom! This woman had an extensive ulcer on the antero-outer aspect of the right leg, involving the greater part of the lower third of the limb. Under chloroform, I thoroughly scraped with a curette the whole ulcer surface, breaking well into healthy tissue all around. The ulcer was thoroughly irrigated with a 1-500 solution of bichloride of mercury, and then with a 1-2000 solution. Then it was dusted thickly with equal parts of boric acid and acetanilid, and then packed with moist boracic gauze. Over this was placed absorbent cotton, and firmly bandaged with a gauze bandage. There was a great deal of pain during the first twenty-four hours, which was caused by the dusting powder, as it has since acted in a similar way with me. I did not intend to change this dressing so soon, but she complained so much of a hot, painful feeling that I changed the dressing, and put on antinosine powder and dry dressing. I left her for three days, and when I took off the dressing there was a marked improvement. The ulcer surface looked healthy and clean, and she said it felt quite comfortable. I dressed the leg again, and requested her to change the dressing each morning; and when I saw it again in a week it was decidedly better. I saw the leg again on two occasions, and on September 6th, six weeks after having begun the treatment, the ulcer was thoroughly healed over. I instructed her to wear a gauze bandage daily for a year. These bandages are light, easily applied, and I have found them most beneficial in lesser cases of varicose veins, answering much better than rubber bandages or elastic stockings.

CASE 3.—Mrs. A——, aged 60; small ulcer, one-half inch in diameter, one inch above outer ankle. She had been using carbolated oxide of zinc salve on it. On July 4th I scraped the ulcer and swabbed over the surface with pure carbolic acid; dressed with antinosine daily, at same time using bandage from foot to knee. By August 2nd, ulcer was completely healed over.

Medical Jurisprudence and Toxicology.

. . . IN CHARGE OF . . .
N. A. POWELL, M.D., AND W. A. YOUNG, M.D.

THE MEDICAL EXPERT'S DUTY AND WHERE HE MOST FREQUENTLY FAILS IN IT. WITH ILLUSTRATIONS FROM THE ZELNER CASE.

BY JOHN V. SHOEMAKER, M.D., LL.D., OF PHILADELPHIA.

EVEN to the ordinary non-expert and non-professional observer it is very obvious that, at the present time, there is something seriously remiss with the medical expert. Why is it that his opinion has come to have so little weight with the court and jury, and is so generally discredited by the public? What possible warrant is there, for instance, for this charge against the professional expert, grave in its implication, made by Judge Davis, of the Maine Supreme Court: "If there is any kind of testimony that is not only of no value, but even worse than that, it is, in my judgment, that of the medical expert?" A partial explanation, by no means, however, complimentary, was given by Chief Justice Chapman, of Massachusetts, who said: "I think the opinions of experts are not nearly so highly regarded as they formerly were; for, while they often afford great aid in determining facts, it often happens that experts can be found to testify to any theory, however absurd." Justice Grier, of the United States Supreme Court, has also publicly stated that "Experience has shown that opposite opinions, of persons professing to be experts, may be obtained to any amount."

It must be that there is some grave dereliction of duty on the part of individuals appearing before the courts of justice in the capacity of medical experts, to give occasion for statements from the bench which reflect so directly and seriously upon the credibility and value of their testimony and indirectly upon the whole medical profession. Let us inquire very briefly as to the duty of the medical expert.

It is the theory, and should be the practice, that the medical expert is called in as *amicus curiæ*, a friend of the court, to facilitate the attainment of the ends of justice. He is brought into court, in the first place, to elucidate by his explanations technical points connected with his profession which otherwise would be

obscure and which might escape comprehension by court or jury; and, secondly, to carefully formulate and express an opinion, based upon his skilled knowledge, upon hypothethic cases submitted to him upon the witness-stand. The medical expert should always keep in mind the wise admonition of Taylor.[1] "In reference to *facts*, a medical witness must bear in mind that he should not allow his testimony to be influenced by the consequences that may follow from his statement of them, or their probable effect on any case which is under trial. In reference to *opinions*, their possible influence on the fate of a prisoner should inspire caution in forming them; but when once formed they should be honestly and candidly stated without reference to consequences." . . . "The questions put on either side should receive direct answers from the medical witness, and his manner should not be perceptibly different whether he is replying to a question put by counsel, for the prosecution or the defence. The replies should be made in simple language, free from technicality."

Having briefly summarized his duties, let us inquire as to the points upon which the medical expert is often remiss. The first and most glaring fault that the medical expert can commit is to permit himself to form a positive opinion as to the general merits of the case, or as to the guilt of a prisoner, and to allow his bias, consciously or unconsciously, to influence his testimony. A second fault, somewhat similar to the first, is the forming of a judgment upon very insufficient grounds and expressing positive convictions upon doubtful points, thereby possibly lending the weight of his personal authority to support error. A third fault is want of scientific accuracy in his definitions and explanations to the court, and the use of technical terms without explaining them in simple language. A fourth fault is in making rash and unguarded statements in reply to questions which require deliberation in order to be answered properly. A fifth fault is in attempting to reply to questions which have not been properly framed, or which are improper in themselves and which should not have been asked of him at all.

A recent trial before the criminal court of this city has again directed attention to the lamentable differences of opinion among those who were called upon to testify as medical experts, and has led many, both in and out of the medical profession, to wish that some arrangement might be devised by which the ends of justice might be attained with less display of differences among doctors. The old question, "*Quis custodiet ipsos custodes*," may be well asked, when authors of text-books and teachers of therapeutics fail to agree upon such simple questions as the diagnosis of strychnin-poisoning and the toxic dose of this well-known alkaloid. In the *Philadelphia Medical Journal*, Professor H. G. Wood, one of the witnesses for the prosecution in the case referred to—the Zelner case, in which a widow was under trial for causing the death of

her husband and was acquitted—has contributed an article in which he expresses his opinion that in this instance there has been a gross miscarriage of justice, and declares that the fault lies at the door of the legal profession and the community. He insists that very radical changes must be made in the system now followed in all our criminal courts, upon whom he lays the blame for "the greatest blot upon American civilization, the extraordinary number of homicides in the United States." In his distribution of censure he omitted, inadvertently, no doubt, to discuss the question whether or not the medical expert himself might not be somewhat at fault. The present communication takes up this side of the question, without intending, however, that it shall be entirely personal in its application, although it will be necessary to refer specifically to Dr. Wood's testimony, in illustration of some of the points that will arise in the progress of the discussion of the salient features of the medical expert testimony in the trial of Mrs Zelner.

The stenographer's official report of the cross-examination contains some remarkable statements, which deserve to go on record among the curiosities of medico-legal literature. It will not be unprofitable to review a part of the testimony in illustration of some of the faults enumerated.

The following extracts are taken *verbatim* from the the testimony of the medical experts. Dr. Marshall was not quite accurate when he defined the "ptomain" of tetanus (page 156[2]) as "a ptomain that results from the life of the tetanus bacterium." In his reply to the question, "Will not the ptomains that arise (in the body), the cadaveric ptomains, many of them produce spasms of lockjaw?" He said, "I know of none except the tetanus-ptomain." As a matter of fact the tetanus-poison is not a ptomain at all, but a specific nuclein or toxin, having little in common with cadaveric alkaloids. The question was also asked of Dr. Marshall, "Is it not a fact that the same colors and the same reactions that you have described here may be the result of contact with ptomains?" to which Dr. Marshall replied, "No, sir:" and when asked if he was positive about that, he responded "Yes." But he should also have informed the court that Ciacci[3] and others declare that there is a ptomain like strychnin, "which resembles strychnin in color-test to sulphuric acid and potassium bichromate."[4] Halliburton ("Physiological and Pathological Chemistry") says that "there is, so far as at present known, no class-reaction by which alkaloids of animal can be separated from those of vegetable origin."

Dr. Marshall further testified (page 165) that the total quantity of alleged strychnin found in the tissues (.015 gr.) "is consistent with the administration of a toxic dose and inconsistent with the administration of a medicinal dose," and yet some therapeutists have administered larger doses. Pereira ("Materia Medica," Vol. II., p. 548) reports a case of a Swede, who was given $\frac{1}{8}$ grain of strychnin three times a day for several weeks. "The dose was then increased to $\frac{1}{4}$ grain, and afterwards to $\frac{1}{2}$ grain, with the same

frequency, for many days without any marked effect." He finally died, however, of a strychnin-asphyxia.[5] Dr. Marshall also made the remarkable statement that when strychnin is referred to in the text-books, strychnin sulphate is usually meant. "That is, among physicians, if a physician speaks of strychnin, he means strychnin sulphate" (page 166). And this in spite of the fact that we have such a thing as a United States Pharmacopeia, which defines strychnina as strychnin, and in which both strychnina and strychninæ sulphas are officinal. Certainly no reputable physician, in writing a prescription, is in the habit of ordering "strychnin" when he means "strychnin sulphate."

The total quantity of the substance which Dr. Marshall obtained from about ten pounds of muscular tissue taken from the thighs and a portion of the brain, and which he positively declared was strychnin, amounted to only .0296 G. (nearly .03 or $\frac{1}{34}$ grain). Mr. Robinson, from a larger quantity of material, extracted enough to make it amount to $\frac{1}{4}$ grain altogether. The latter gentleman stated that he had also found in the stomach and intestines another $\frac{1}{4}$ grain, so that the two chemists working on about twenty pounds of tissues from Reuben Zelner's body, assert that they detected about $\frac{1}{4}$ grain of absorbed strychnin besides about $\frac{1}{4}$ grain of strychnin in the intestinal tract which had not been absorbed (and consequently had not caused any toxic effects).

The coroner's medical examiner, Dr. Cattell, testified that he had personally never witnessed a case of strychnin-poisoning and was not familiar with the symptoms; and also that he had found lesions in the brain, which, "if in larger number, might have caused death," and yet, which he "did not think" could have been the cause of death. Nevertheless, he was willing to swear positively, after having been informed of the results of the analysis made by Dr. Marshall and Mr. Robinson, that the condition found "was not consistent with death from natural causes" (page 202) and that "Reuben Zelner died from the effects of strychnin-poisoning" (page 204). At the same time he refused to declare that there were no ruptures of the brain or its membranes; he would only say that he "did not see any." He admitted, however, that there were lesions of the spinal cord (page 206) which he could see with the naked eye, and congestion of the blood vessels (page 207).

When asked by the court if this condition of the spinal cord, when taken in connection with the lesions found in the brain, could in any case have caused death, Dr. Cattell said, "I can't answer that question." And then he explained his inability on the ground that "it is too indefinite" (page 208). This answer concluded his testimony, and left the court with a reasonable doubt as to the cause of death, and discredited his former positive statement that death was caused by strychnin and by nothing else.

Dr. Horatio C. Wood was placed upon the stand and was asked if he had read the testimony of Sergeant Hoffman, and had heard the testimony of the two chemists, Dr. Marshall and Mr. Robinson,

and also the testimony with regard to the negative results of the *post-mortem* examination; and, on his reply being affirmative, he was further asked by the District Attorney the following question: "Taking all these into account, what do you say was the cause of death of Reuben Zelner?" His reply was given without a moment's hesitation, "My opinion is that the death was due to strychnin-poisoning. The cause of death was strychnia."

With due respect, it may be submitted that the District Attorney should not have asked, and Dr. Wood should not have answered, this question. Dr. Wood should have demanded that a hypothetic case should be submitted for his opinion, and his reply should have been (unless he changed his mind), "My opinion is that in the hypothetic case submitted to me, the cause of death was most probably strychnin-poisoning." The testimony at most could only establish a strong probability and not an absolute certainty. There were not sufficient facts in the evidence submitted to make it clear enough to warrant the expression of a positive opinion as to the cause of death. The only witness who testified to the clinical symptoms gave testimony which, both positively and negatively, was opposed to the theory of death as the result of strychnin-poisoning. Sergeant Hoffman did not give in his graphic recital the characteristic and classical symptoms of strychnin-poisoning. He said nothing about convulsions until he was interrupted by the District Attorney, who suggested the words "convulsive and rigid," whereupon he replied, "Yes," and then continued his account, which showed that he had no apprehension of a fatal result, and said that he considered it an ordinary case of cramps, until Zelner "turned his face to the right and he says 'dying,' he straightened out and was dead." How can any unprejudiced mind see any analogy here to the violent convulsive spasms which accompany strychnin-poisoning? Zelner simply straightened out, or stretched himself out, in his death agony—no convulsions of muscles, no locking of the jaw, no lividity of the face.

One fallacy appeared in the evidence that, in passing, invites examination. Without commenting upon the fact that Dr. Wood added together the amount of alleged alkaloid extracted from the tissues and that which had *not* entered the tissues but was found in the stomach, in order to make an amount large enough to approximate what he fixed as the toxic dose of strychnin ($\frac{1}{2}$ grain), let us proceed to examine his statement that "the minimum dose of strychnia that has taken life in the adult is from $\frac{1}{3}$ to $\frac{1}{2}$ grain." . . . "So that there was present without doubt more than the minimum fatal dose of strychnia in the body of Mr. Zelner." The fallacy here consisted in assuming that the minimum fatal dose, or something near it, would necessarily be fatal in the case under discussion. Why did not Dr. Wood inform the court that strychnin has been given medicinally in doses of $\frac{1}{4}$ and $\frac{1}{2}$ grain, without producing death, and that in a recent issue of the *Therapeutic Gazette* he had himself advised the administration of $\frac{1}{2}$ grain of

strychnin sulphate at a dose? Dr. H. G. Thomas, of Alliance, O., reported a case in which a man swallowed 5 grains of strychnin, and one hour and three-quarters elapsed before any symptoms manifested themselves, and yet, under the use of emetics, the patient recovered. Dr. T. Anderson has also reported a case of a man who took 7 grains in two doses, five hours apart and entirely recovered. (*American Journal Medical Sciences*, 1848, page 562.[6])

In Dr. Wood's own work on "Therapeutics," he mentions cases where 10, 20, and, in one instance, even 22 grains of strychnin have been swallowed and yet failed to cause death.[7] Moreover, the statement of Dr. Wood, that strychnin, when taken in medicinal doses, does not accumulate in the system, must not be taken too absolutely, as it is a rule with exceptions. Dr. Wormley, a former colleague of Dr. Wood's, said that "This result has occasionally been observed," and gives an illustrative case.[8]

When asked if the phenomena might not have been due to poisoning by ptomains, Dr. Wood replied (page 222), "Ptomain-poisons don't act like strychnia upon the blood pressure. The whole question of ptomain-poisoning, I may say, is a very recondite, hidden one, with a very great deal of difference of opinion even as to their existence in the profession; but they are usually very typical, producing gastrointestinal irritation, with lower blood pressure, more or less fever and exhaustion, with or without convulsions. Ptomain-poisoning does not produce an abrupt death, a straightening-out, which was described in this man; which I have never seen in anything but strychnia-poisoning, and which I cannot conceive of as coming from anything but strychnia or tetanus."

Is there not some recklessness of speech in such statements? Dr. Wood may not be fully posted as to what is going on in other departments at the university than his own, but he should know that all the principal medical colleges in Pennsylvania include in their teaching to the students some positive instruction on the subject of ptomain-poisoning, which is by no means a "recondite, hidden one" at the present day. McFarland's "Text-Book upon the Pathogenic Bacteria" (Philadelphia, 1898), which is received as an authority and recommended to students by the Faculty, has, on page 78, a very clear statement as to the nature of these putrefactive alkaloids, and named a number of them, which are now recognized by those familiar with the subject. It is not true that there is "a very great deal of difference of opinion, even as to their existence, in the profession," if we mean by this term the portion of the profession which is informed upon the subject, and whose opinion alone should have any weight in a court of justice.

Experiments made by Laborde upon a substance extracted from the spleen of an ox showed that it possessed decided toxic properties, "bringing on a dyspneic condition with convulsive movements and loss of motion." (Vaughan and Novy, "Ptomains, Leukomains, Toxins and Antitoxins." Philadelphia, 1896. Page 539.)

Ptomains giving reactions similar to those of strychnin and also causing tetanic spasms, have been found in dead bodies by Selmi and others (Vaughan and Novy, page 284). A few milligrams of one of these ptomains injected under the skin of frogs "caused instantaneous death.'

When more specifically questioned as to the cause of death, Dr. Wood replied categorically to questions as follows:

(Page 231.) *Q.* In this case what would you say was the cause of death?

A. Cramp asphyxia.

Q. Explain what that means.

A. It means that the spasm of the muscles of the trunk sets the trunk in a rigid cast so there can be no movement of inspiration or expiration, and no air comes in and out of the lungs, and the patient dies.

(Page 232.) *Q.* Does he die from want of air?

A. No, sir; there is plenty of air there; he dies from inability to get air in.

Q. And to get air out?

A. Yes, sir.

Q. He cannot respire at all?

A. No, sir; he cannot move his chest.

And yet Officer Hoffman swore that this man who, according to Dr. Wood, could "not move his chest," and who died "from inability to get air in," conversed with his attendants and uttered complaints up to the very moment of dissolution!

The learned judge permitted the question to be asked, "whether or not such a condition of brain as that (which Dr. Cattell had described) would be found in a case of strychnia-poisoning." Dr. Wood replied, "Any violent continuing convulsion, putting an enormous strain and pressure on the blood vessels, may give rise to little ruptures of the blood vessels, and there may escape into mucous membranes of various character minute spots of blood, and they may give rise also to trouble in nerve-tissue; in forcing out as fluid some of its watery parts, and so, while the existence of ecchymoses, or the existence of watery exudation, does not prove that a patient had died of strychnia-poisoning; and while their absence does not prove that the case was not strychnia-poisoning, they may be present; they are an accident secondary to poisoning, shifting, sometimes present, sometimes not."

The coroner's physician, as has already been stated, admitted that lesions in the brain in the case of Reuben Zelner might have existed, and yet have been overlooked by him, on account of his neglect to use all the means at his command to determine whether they were present or absent. Dr. Cattell, when asked whether or not death might result from such microscopic lesions of the brain, testified at first that he did not know; and then, correcting himself, declared positively, "I say death might occur from such lesions" (page 201). This admission that the cause of death

had not been positively established, and that a more careful examination of the brain might have revealed lesions which might have been the cause of death, left the whole question in doubt and broke the back of the case of the Commonwealth. This is more particularly evident when the statement is taken in conjunction with the second admission of the coroner's physician, that he did find a lesion of the brain, "a slight edema" (page 204), and "a fluid which leaked out of the blood vessels," and his confession, when in reply to the question, "Wouldn't such fluid, leaking out of the blood vessels, cause death?" that "it might." The amount of edema, or effusion, amounting to 15 cc., "or perhaps half an ounce," according to this authority, did not cause death, "because it was not sufficient;" however, "if in sufficient quantity, it might cause death."

Collating the evidence of Dr. Wood and Dr. Cattell upon the subject of the condition of the brain and spinal cord, the edema and serous effusion—what is commonly known as "serous apoplexy"—it appears that *if it had been caused by strychnin-poisoning it must have been the consequence of* [in the words of Dr. Wood] "*violent continuing convulsions, putting an enormous strain and pressure on the blood vessels.*" Now, it is very clear that the prosecution produced not a scintilla of evidence that such "violent continued convulsion, putting enormous strain on the blood vessels" had been observed during life. If Reuben Zelner's features had been livid and turgid with blood, would not this fact have struck even an unprofessional observer? If he had been black in the face, would not the friendly policeman have been impressed by it? If there had been "violent, continuing convulsions," would not the bystanders have commented upon the fact? It is very significant that Officer Hoffman said not a word about convulsions, violent or otherwise. In fact, convulsions, although the keystone of the arch of the theory of strychnin-poisoning, would not have appeared in the testimony at all, had not the Attorney for the Commonwealth put the words in the witness's mouth by a leading question, and although the witness answered "yes," it is doubtful if he fully comprehended the sinister significance of the question. Further examination of this man (who was the only witness of the symptoms prior to death that the Commonwealth relied upon to bolster up the theory of the medical experts that the symptoms were produced by the toxic action of strychnia) developed nothing to sustain this theory, but on the contrary he swore that there was no sardonic grin and no lividity of the face, and other symptoms usually present in strychnia-poisoning. The only clinical fact elicited by the Commonwealth in support of the theory of strychnin-poisoning was cramps in the legs, unless the statement that "he straightened out and was dead" might, in the mind of the medical expert, become transformed into "violent, continued convulsions," which would be required, according to Dr. Wood's testimony, to account for the

existence of the brain lesions found by Dr. Cattell, which Dr. Cattell swore might have caused death, but did not because there were a few cubic centimeters less of the fluid in the brain than he considered requisite to produce the fatal result.

And it was on testimony such as this that the prosecuting attorney relied to convict, on otherwise purely circumstantial evidence, a poor woman of one of the most serious crimes known to criminal law! The learned judge certainly showed great restraint in simply directing the jury that no case had been made out, and that it was their duty to acquit the defendant without leaving the box, instead of expressing his just indignation that a woman's character should have been assailed and a human life should have been put in jeopardy on such flimsy grounds.

In the article published in the *Philadelphia Medical Journal*, February 18th, 1899, upon the Zelner case, Dr. Wood alludes freely to the "lust for gold," and intimates that the medical witnesses for the defence were animated by mere mercenary motives. In reference to this particular case the most direct rebuttal that could be made to the implied charge is contained in the following letter, which I submit from the defendant's counsel:

"My Dear Sir,—I have read Dr. Wood's article on the Zelner case in the *Philadelphia Medical Journal* of February 18th, 1899, and I note these statements: 'From doctor to doctor with a large fee in hand, the counsel goes, until at last a man is found who is willing to give the opinion that is wished.' . . . 'Dr Hobart A. Hare was consulted by the attorneys for the defence, but gave the positive opinion that the case was one of strychnin-poisoning, and consequently he was not called upon to testify.' It is the fact that Dr. Hare was consulted by one of my colleagues solely at your request as to his ability to qualify as an expert for the defence. No *positive* or any other opinion was given by him that the case was one of strychnin-poisoning. His sole reason for declining to act as an expert was, 'I would not care to take the stand as opposed to Dr. Wood,' intimating, I believe, that Dr. Wood has been his preceptor. No fee was offered or demanded by him, and the only fees paid were those paid to yourself and Dr. Meeker, both very moderate and proper, and entirely consonant with the limited means of the unfortunate prisoner, and very much less than the sum for which Dr. Woods afterwards 'mandamused' the city. No other physician was approached or consulted, and Dr. Hare would not have been thought of, if you, yourself, had not suggested him. It is to be observed, therefore, that these statements, along with nearly all others of the article, have merely a bowing acquaintance with the facts; they certainly can claim no undue familiarity with them. The ingenious and versatile gentleman who wrote the article has embellished and adorned it with the fragrant flowers of an oriental fancy. His whole paper as a literary production is unique. It cannot be classified. As a work of fiction it lacks interest; as a mere history, it is redolent of legend and fable.

And yet it carries us back to the trial, and reminds us that we should be profoundly grateful to this eminent gentleman, who for thirty years has contended in courts of justice with those adverse forces which have retarded American civilization, and made the American people a 'byword and a reproach' among the 'upper middle classes in England and the Continent of Europe;' grateful in the knowledge, which we are sure will also gratify Dr. Wood, that his remarkable effort on the witness-stand to reconcile and harmonize (or perhaps differentiate) the expert and the author, potently determined and greatly accelerated the very sensible conclusion of the Zelner case.

"Very sincerely yours,

"(Signed) MAXWELL STEVENSON.

"To JOHN V. SHOEMAKER, M.D., 1519 Walnut Street."

1. "A Manual of Medical Jurisprudence," by Alfred Swaine Taylor. Eighth American edition, by John J. Reese, M.D., Philadelphia, 1880. Pages 48 and 54.
2. This number refers to the page of the stenographer's court report.
3. Vaughan and Novy, "Ptomains, Leukomains, Toxins and Antitoxins." Philadelphia, 1896. Page 539 *et al.*
4. Also see Farquharson on the "Medico-legal Importance of Ptomains," *The Journal of State Medicine*, London, January, 1893.
5. Quoted by Wormley. "Micro-Chemistry of Poisons" (page 548). Philadelphia, 1885.
6. Quoted from Wormley's "Micro-Chemistry of Poison." Philadelphia, 1885. Page 546.
7. "Wood's Therapeutics, Its Principles and Practice," 9th edition. Philadelphia, 1896. Page 546. 8. *Loc. cit.* (page 548).

—*The Philadelphia Medical Journal.*

W. A. Y.

Plague and the Mecca Pilgrimage.—Something approaching alarm must be aroused by the news as to the outbreak of plague at Jeddah, the port of Mecca, on the Red Sea, and the behavior of the authorities there. Attempts at enforcing quarantine regulations at Jeddah met with direct opposition by the pilgrims and residents; the troops, it is said, sided with the pilgrims when attempts were made at isolation. An outbreak of plague at Jeddah or Mecca will too probably be followed by the establishment of the disease in Egypt, Syria and Turkey. With the shores of the Suez Canal infected, the infection of Europe is a contingency quite within the range of possibilities, and one of the chief stepping stones in the path of infection is by way of the Mohammedan pilgrimages to Mecca. Any laxity in the sanitary regulations at Jeddah can but hasten the inroad. We observe in India also that the presence of plague is being taken as a matter of course, and that the stringent rules of segregation and isolation are giving place to social conveniences. We have no fear, however, of the Indian authorities losing their hold on the outbreak of plague; but in an uncivilized country, such as Hedjaz, with what authority there is set at defiance, and the possibility of spreading the disease unlimited, we cannot but feel concern.—*Brit. Med. Jour.*

REPORT OF DEATHS FROM ALL CAUSES AND FROM CONTAGIOUS DISEASES IN ONTARIO FOR THE MONTHS OF JUNE AND JULY, 1899.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

JUNE, 1899.

Total Population Reporting.	Total Municipalities Reporting.	Total Deaths Reported.	Rate per 1000 per annum from all causes.	Scarlatina.	Rate per 1,000 per Annum.	Diphtheria.	Rate per 1,000 per Annum.	Measles.	Rate per 1,000 per Annum.	Whooping Cough.	Rate per 1,000 per Annum.	Typhoid.	Rate per 1,000 per Annum.	Tuberculosis.	Rate per 1,000 per Annum.
2,108,666	675	1,521	9	12	0.07	22	0.1	5	0.03	4	0.02	13	0.07	157	0.9
92%	88%														

JULY, 1899.

2,168,115	670	1,643	9.5	7	0.04	20	0.1	5	0.03	6	0.03	15	0.08	178	1.0
95%	86%														

Population of Province 2,283,182

Registration Divisions of Province..... 777

The Canadian Journal of Medicine and Surgery

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

VOL. VI. TORONTO, NOVEMBER, 1899. NO. 5.

Editorials.

DR. SCHWENINGER'S TREATMENT OF OBESITY.

PROFESSOR HERMAN COHN, of Breslau, when stopping at Baden-Baden visited an establishment for the treatment of obesity according to Dr. Schweninger's method. The method was decidedly strange, but the results were so brilliant and the cures so marvellous that he gives in *La Presse Médicale* a full account of it in all its details. He mentions cases of obese persons who lost twenty pounds

after a stay of five weeks, and fifty pounds after eight weeks. A lady who weighed 240 pounds, was brought down after nine months' treatment to 145 pounds. Obese persons who were subject to cardiac arythmia and had taken digitalis for years, recovered rapidly the regular functional working of the heart. Before the cure they could not take two steps without losing breath; afterwards they could take long walks without the slightest fatigue. An obese person who was forced to stop at every step when mounting a staircase, could, after six weeks' treatment, with the greatest ease, walk up to the castle of Baden, which is situated at a height of 435 metres. Patients subject to insomnia began to sleep six or seven hours at a stretch after treatment. The Schweninger cure depends on the use of three therapeutic methods: (1) massage of the abdomen, (2) hot baths, (3) diet.

Massage.—This is done three times a day—before breakfast, dinner and supper—and each sitting lasts a quarter of an hour. The patient lies on a couch, the thighs slightly flexed on the abdomen, the legs on the thighs in order to relax the walls of the abdomen, the hands placed at the occiput to support the head. Each sitting of massage comprises three distinct series of manipulations—tapping, pinching and kneading. The physician begins by tapping on the epigastric region, at first lightly, afterwards more strongly, so as to sink his two fists as deeply as possible into the abdomen of the patient. In the meantime, the patient is obliged to breathe deeply, as deeply as possible, in order to exercise his diaphragm. The effort is so difficult and painful, that at first the patient can only take five deep respirations; later on he can take twenty deep respirations. The physician next practises pinching. He grasps between the palms of his hands large pieces of the abdominal walls and squeezes them as forcibly as possible, in such a way as to crush the subcutaneous fat lobules. The force employed is so great that the patient's skin is covered with bruises. This is a most painful kind of massage and often extracts groans and tears from the patient.

To execute the third stage of the treatment, the physician places himself over the patient, sinks his knees as deeply as he can into his abdomen and principally in the epigastric region, remaining in this position until the patient shall have taken at first five, afterwards seven, then ten, and finally thirty deep inspirations.

According to Schweninger this part of the treatment is of the greatest importance, for it alone enables the operator to effect a

suitable gymnastic exercise of the diaphragm, and to cause the melting of the fat, which surrounds the heart and lungs and interferes with their proper functions.

Professor Cohn could scarcely believe his eyes the first time he saw this treatment. He feared at every moment that he would see the intestines of the patient ruptured and the movements of the heart arrested. Nothing of the kind happened; the patients came out of it safe and sound, although they had to go through it three times a day. At last they got used to it. They were very tired after massage and were obliged after each sitting to remain stretched on the couch for some time.

Hot Baths.—The hot baths are also given in a peculiar fashion. On the first day the patient takes a bath for the arms, on the second day for the legs, on the third day for the hips, and the series recommences in the same order as long as he stays at the hospital. Entire baths are never given. These baths are given in a very simple but special kind of apparatus. For the arm-bath, beginning at the shoulder, they use a kind of tin box, provided with a cover pierced with four holes, two for the entrance of water and two to let it escape; inside there are two supporting straps for the hand and forearm. The bath for the inferior extremities is shaped like a boot. The hip baths are given in ordinary bath-tubs. The initial temperature of the bath is 99.5 F., and it is progressively raised to 122° F. The bath lasts for twenty minutes. The first impression caused by the bath, especially the hip bath, is extremely painful, the patient experiencing a kind of sudden shock; after some time he gets used to them and can stand the high temperature. Such is the fatigue, which supervenes after these hot baths, that the patients generally fall asleep for half or three-quarters of an hour.

Diet.—The diet is equally singular. Everything is served in very small quantities, and the dishes and plates bear a proportion to the portions served. The glasses are doll glasses, scarcely holding eleven drachms of liquid; the plates are so small that a slice of meat has scarcely room on it. The knives, forks and spoons are all small, as if intended for children. The meals are taken with the greatest regularity every three hours, first breakfast at 7.30 a.m., second breakfast at 10.30 a.m., dinner at 1.30 p.m., collation at 4.30 p.m. and supper at 7.30 p m. There is no regular dining table; the patients eat in their own rooms and a few minutes suffice for each meal. The foods which are rigorously excluded from all meals

are bread, biscuits, cakes, butter, fat, sugar, coffee, tea, milk, wine, beer and brandy. However, the menus are varied. At the first breakfast the patient gets a slice of Dutch cheese or Gruyere, but without bread or butter, or ten prunes, or an egg, or a plate of potatoes, or a slice of ham, or a plate of turnips or carrots, or a little veal sweetbread, or a plate of clotted milk. For second breakfast a little meat is served, roast beef or roast veal, an egg, or some cheese and a vegetable. At dinner meat is served: a slice of roast beef, mutton or veal, ham or cutlets of lamb, or a slice of chicken or calf's liver. No sauces, stews or salads. For collation the patient gets a little vegetable, some clotted milk or some fruit. Dinner consists of vegetables, radishes and cauliflower, a little fish, salmon, sole, trout, or an egg, clotted milk, calf's sweetbread, or a slice of ham with maccaroni. At none of these meals do the patients drink. A half hour after each meal they are permitted to drink one of these little glasses of a gaseous mineral water (Gerolstein or Sprudel). Each patient gets, in the morning, about half a litre (40 centilitres of this water) which must last the whole day. As a supplement they get some fruit before retiring. If they feel thirsty during the night, they can eat a pear or a prune. J. J. C.

INTERNATIONAL CONGRESS FOR THE PREVENTION OF VENEREAL DISEASES.

An international reunion of physicians and public functionaries, interested in the prevention of venereal diseases, was held in Brussels from the 4th to 9th of September. It would be very difficult, of course, to consider in one article a tithe of the questions discussed, and the opinions expressed on the varied phases of the social evil. We deem it more instructive, therefore, to lay before our readers the conclusions expressed by Professor Neisser, which form a complete method of dealing with the evil, although it is likely that a small part only of his programme will be realized. At all events, on account of the high scientific standing of Professor Neisser, his opinions will be received by physicians with great consideration. He said: "Prostitution depends on two kinds of causes: 1. Causes which induce women to give themselves to this business: (*a*) want of good advice and education; (*b*) promiscuity in lodgings, workshops, in the fields; (*c*) looking at the sexual relations of animals; (*d*) seduction, temptation by companions or

governesses, etc. Young girls accustomed to the sexual act are led on to prostitution by: (*a*) levity, idleness, the attraction of an amusing, easy life; (*b*) the poverty resulting from low wages, from irregular, accidental loss of time, necessity of providing for the existence of children; (*c*) certain professions—waitresses, actresses, chambermaids, etc.; (*d*) solicitation by panders; (*e*) premature inscription on the police rolls as prostitutes, which cuts off all return to a decent life. Social causes are more operative in leading girls into prostitution than their own inclinations, which, however, are also worthy of consideration.

"2. The number of prostitutes is generally regulated by the law of demand and supply. Having mentioned the causes which induce women to offer themselves, we may consider those which govern demand on the part of men, that is to say, all those which excite the sexual instinct: Belief in the difficulty of preserving chastity, excessive drinking, influence of comrades, of societies, etc.; shows and books, indecent posters on the streets, and in cafés, etc.

"A young man of the lower orders can satisfy his sexual desires with one of his class without compromising irretrievably the reputation of his mistress; but an unmarried young man of the middle class cannot have sexual relations unless with a prostitute. Besides, marriage is deferred more and more in cities, on account of the exigencies of material life and the general demand for luxury, so that it is social rather than individual causes which govern the demand for prostitutes.

"*A. How shall the supply of women who become prostitutes be diminished?* (1) Education by the State, in families or asylums, of children who have no moral guidance; (2) international restriction of labor by married women in factories; (3) inspection of lodgings from a moral point of view; (4) improvement of lodgings; (5) separation of the sexes at school; instruction to be given to girls by female teachers; (6) restriction and inspection of the labor of young girls; creation of homes for them in industrial localities; institutions for relief where they may be helped when out of work; (7) suppression of the orders which in institutions for shelter cause help to be refused to cases of venereal disease; (8) help for unmarried mothers and their children; (9) separation of workmen and workwomen in factories, in cloak-rooms, water-closets, and at the hours of entrance and leaving; (10) repression of panderism, institution of refuges for young girls and women arriving in a strange city; (11) confinement of prostitutes to certain houses; refusal of per-

mission to carry on this business in houses where rooms are rented, especially if children live in them; (12) reform in the regulation of prostitution: (*a*) it should be regulated by law; (*b*) a prostitute, before being put on the list, should be admonished, and afterwards placed in an establishment intended for labor and the improvement of her condition; finally, if placed on the list, she ought to be examined regularly (girls in brothels three times a week, and the others once a week), and she should have a book containing her photograph and medical history; (*c*) supervision should not be exercised by the police, but by male and female inspectors of lodgings, and special female inspectors working under the direction of a superior functionary; (*d*) a prostitute submitting to the regulations should not be inconvenienced in any way; if refractory, she ought to be sentenced to six months' confinement in the establishment for labor and improvement, or in a prison.

"*B. What means may be used to lessen the demand for prostitutes by men?* (1) Demonstration by all persons charged with the instruction or education of the young of the dangers of sexual relations outside of the married state, and of the possibility of living a chaste life; associations to push the propaganda against immorality and alcoholism; (2) a campaign against pornography; (3) close watching of cafés in which waitresses are employed; (4) confinement of prostitutes to brothels, and suppression of legal enactments forbidding the establishment of brothels; (5) responsibility of a man for the consequences of the sexual act; (*a*) severe punishment for defloration, even going so far as to give the defloured woman the rights of a legitimate wife; (*b*) indebtedness for the board and lodging of the pregnant woman and of her illegitimate child, which has a right to a part of the father's inheritance; (*c*) severe penalty for abortion; (*d*) establishment of asylums for illegitimate children; (*e*) severe punishment for rape, seduction by deceit, promises, etc.; (*f*) raising to eighteen years, at least, the age of consent.

"To complete these measures the following should be adopted:

"1. Every one having a venereal disease, and knowing its nature, is bound to be treated, either by a private physician or at a dispensary or public hospital;

"2. The physician ought to oblige a patient with venereal disease to receive regular and complete treatment, aided by the public authorities, if necessary;

"3. The treatment of venereal diseases by any one not belonging to the medical profession ought to be severely punished."

Many of the suggestions in Professor Neisser's paper will commend themselves to physicians as just and wise; but the confinement of prostitutes to brothels and the regulation of their traffic by law are repugnant to the moral ideas of Christians, and would never, we feel confident, be adopted in Canada. Assuming that such a method would lessen the spread of venereal diseases, it is unfair to make the woman bear all the ignominy and expense of a medical inspection, while her male visitors are not submitted to any official inspection. Besides, it would be impossible to control the venereal diseases of the prostitutes of a large centre in this fashion, because many women conduct this business in a clandestine way, and will always be able to evade inspection. The three last clauses, providing for the treatment of venereal diseases by physicians, are judicious, and should be made obligatory in every country. The proper recognition and efficient treatment of venereal diseases are matters of the highest importance to the public weal, and it is much to be regretted that in this country these diseases are often treated by pharmacists who are not qualified for the office. It would redound to the credit of medical teaching if special instruction were given in the diagnosis, prognosis and treatment of these diseases, which are neglected by students, because they are not made the subject of questions at the examinations. The medical student should be taught to recognize and treat such diseases during his pupilage, and the Medical Council of Ontario should see that suitable instruction is given. J. J. C.

"THE CANADIAN PRACTITIONER" VS. THE CANADIAN MEDICAL ASSOCIATION.

> "But thou, friend and scholar, select from thine own caste,
> And make not an intimate of one, thy servant or thy master."

We purposely avoided in our last issue any reference to the disquieting scenes of the closing session of the Canadian Medical Association, a few weeks ago—scenes regretted by all. We are sorry that our contemporary, *The Canadian Practitioner*, of which Dr. Adam Wright is editor, should strive to rekindle the dying fire of discord by an editorial in its October number.

The editor, among other things, remarks that the reason of all the recent trouble was that the Secretary, Dr. F. N. G. Starr, is an "extreme party man." Of course, as everyone knows, the editor

of the *Practitioner* is *not* a party man! not he!! Again, he remarks, "We were not in the inner ring." Poor Adam! we weep for thee! Not in the inner ring? Adam not in the inner ring?? Here, you fellows, what do you mean? Let Adam into "the inner ring."

Another Toronto journal, in describing the Association meeting, says: "A certain faction of the Toronto School of Medicine were most effectively sat upon and squelched." Evidently the professional public understands by *faction*, not (Heaven be praised) faction of the Canadian Medical Association, but faction of the Medical Faculty of the University of Toronto. This latter institution, in an educational way, is of importance. On its Faculty are many men of ability, men of whom the University and the profession are justly proud. Still they by no means constitute the whole medical profession, the majority of whom are neither "Jew nor Greek, bond nor free" in this regard, and who, to their credit be it said, maintain a neutrality based upon loyalty towards the interests of the medical profession in its entirety. We sincerely regret that there should be a party spirit among any. We are justified in asking, What has the profession, as a body, done that it should be constantly bored at its meetings with the petty quarrels of any party or clique dragged forth and aired so often? For Heaven's sake, honored messieurs of the University Faculty, *et al.*, cease this childish nonsense.

This year the basis of the "split" was the question of the re-election of the General Secretary. The Association, however, by its vote, showed its appreciation of the Secretary's former work, and also its determination not to permit any faction discord to longer prove a factor in its affairs. Let us hope, with the dawning of the new century, the Association motto and watchword may ever be, "United we stand, divided we fall."

The Canadian Journal of Medicine and Surgery has ever maintained its standard of impartiality, meting out to friend or stranger alike, censure or approbation, but ever tempered, we hope, with justice, or remarked in the spirit of mere fun. But in the editorial to which we have referred, a meaner chord has been struck by our contemporary in referring to the General Secretary of the Canadian Medical Association. The only fault that any other than the editor of the *Practitioner* has laid to his charge, has been that he erred in judgment by staying a day too long at the, alas! thankless and arduous post of General Secretary of an ever-growing Association.

The personal censure of Dr. Starr, former pupil, and now a colleague, of Dr. Adam Wright, may some day cause that former pupil, and now colleague, to use the language of the Rubaiyat of Omar Khayyam, and say:

> "Indeed the idols I have loved so long
> Have done my credit in this world much wrong,
> Have drowned my glory in a shallow cup,
> And sold my reputation for a song."

W. A.

THE PLAGUE.

Reports to hand of the epidemics of plague in Egypt and Portugal show smaller death-rates than statistics we are accustomed to see from India and China would lead us to expect. In the last-mentioned countries, natives seized with plague generally die. In Alexandria, however, one-half the cases have recovered, and in Oporto, out of sixty-four cases but twenty-five persons died. Whatever may be the correct explanation of the apparent mildness of the plague in Egypt and Portugal, it does not remove the danger of an attack, does not lessen the labors of the sanitary authorities in these countries, and does not prevent the paralysis of business, which prevails in the infected centres. In Oporto many of the shops are closed. Strange to say, the general health of that city is excellent, a circumstance which may be largely owing to the rigorous enforcement of sanitary measures against filth and overcrowding (the recognized concomitants of plague), but which are also responsible for other diseases besides the plague.

Telegrams also show that plague prevails at Poona (India), Mauritius, Madagascar, Hong-Kong and Incou, near Ta-Lien-Wan, China. A rumored outbreak at Lourenco Marques may, if confirmed, prove important to the British military authorities, on account of the proximity of a possible plague centre to the actual seat of war in the Transvaal. The spread of plague in a civilized country can be prevented by sanitary measures, viz., careful isolation of the sick, disinfection of the homes of the sick, and of those who have died of the disease, disinfection of the sick-room and all articles used by the sick. Overcrowding should be prevented.

Scrupulous cleanliness in and about dwellings and ventilation are important for those not attacked, and doubly so for the sick and those in attendance upon them. All persons, travellers and

others who have been exposed to the contagion, should be isolated, disinfected and watched for at least eight days.

The disappearance of the plague from Europe during the present century until the actual outbreak at Oporto is probably due to the effects of sanitary improvements and great rigor in enforcing health regulations. Conditions of filth and neglect must doubtless have prevailed to a considerable degree at Oporto, or this microbe of the lowest depths of foulness and misery would not have installed itself in that city.

So far, plague has not appeared in North America. As far as Canadian ports on the Atlantic coast are concerned, an invasion of plague need not be feared. Its stage of incubation is short, ranging from three to five days and if a sporadic case were to appear, it would be noted on shipboard and could be isolated at the land quarantine station after the arrival of the vessel. The same precaution could be taken in the Pacific ports of Canada. A trip from Yokohama to Toronto is made in sixteen days, and a trip from Hong-Kong to Toronto lasts twenty-three days. Chinese coolies or other passengers travelling by the Empress Line to Canada from Hong-Kong, Amoy, Swatow or other infected ports, would, if attacked with plague, be taken sick prior to their arrival at Victoria and could be quarantined at that port. This view of the question does not, of course, apply to infected bedding, clothing, etc., belonging to people who have died of plague, which, if precautions are not taken at the port of embarkation, may be brought to America by Chinese emigrants. We commend this possible means of infection to the consideration of Dr. Montizambert. J. J. C.

WORDS OF PRAISE FOR OUR OCTOBER ISSUE.

We very much regret the fact that, in spite of our having printed quite a number of extra copies for October, we were simply unable to supply the demands received for additional journals, containing the photogravure, "The Country Doctor." It is a source of great satisfaction and pleasure to the staff to find our efforts to turn out a pleasing publication endorsed in the manner in which it has been during the past few months; and it will be our endeavor in the future to merit this even more than in the past. It would take up a great deal more space than we could give were we to reproduce even a proportion of the complimentary letters we have received

in reference to last month's issue; but we can accomplish the object just as well by giving two of the communications received—one from the firm who are owners of the original oil painting, "The Country Doctor," and the other from a practitioner in a neighboring town.

W. A. Y.

Editor CANADIAN JOURNAL OF MEDICINE AND SURGERY,
Toronto, Ont., Canada.

"DEAR DOCTOR,—We are just in receipt of the October issue of the CANADIAN JOURNAL OF MEDICINE AND SURGERY, and are pleased to note your unusually excellent reproduction of our painting, "The Country Doctor," which elicited so much admiration when exhibited at the recent meeting of the Canadian Medical Association. We desire to thank you for this courtesy, and incidentally to say that we consider the JOURNAL a handsome piece of press-work, an ably edited exponent of all that is best in Canadian medicine, and withal, a medical advertising medium second to none in the Dominion.

"With best wishes for your continued success, both personal and journalistic, we remain,

"Very truly yours,

"————————."

Editor CANADIAN JOURNAL OF MEDICINE AND SURGERY,
Toronto, Ont., Canada.

"DEAR SIR,—I am probably a stranger to you and your staff, but have been a reader of your JOURNAL almost ever since its first issue. It has been getting better all the time, and I think that this month's number is certainly a credit to you. The plate of "The Country Doctor" is well worth framing, and is a beautiful piece of work. I have been reading one or two other Toronto medical journals for years, but yours is away ahead of any of them. Enclosed please find post-office order for three years' subscription, as per account recently rendered.

"Yours truly,

"————————, M.D.

"————, Ont., October 9th, 1899."

DR. F. H. SCHERK, of the Toronto University class of 1889, who has been in practice for some time in East Toronto, has sold out to Dr. J. D. Webster (Univ. Tor. '98), and is about moving to Los Angeles, California, where he intends taking up practice. We wish him every success under the Stars and Stripes.

The Physician's Library.

BOOK REVIEWS.

Twentieth Century Practice. An International Encyclopedia of Modern Medical Science, by leading authorities of Europe and America. Edited by THOS. L. STEDMAN, M.D., New York City. In twenty volumes. Vols. IX., X., XI., XII. New York: Wm. Wood & Co. 1897.

It would seem that this work improves as one progresses in the reading of it, as if Vols. IX., X., XI. and XII. are taken as samples of the material presented throughout by the authors, it is particularly good, and makes the "Twentieth Century Practice" a work of exceptional value. Vol. IX. deals with "Diseases of the Digestive System," and has a noble army of contributors. Among the number appear the names of such well-known writers as Carl Anton Ewald, V. P. Gibney, John B. Murphy, Alfred Stengel, and John B. Walker. "Local Diseases of the Mouth" are treated of by Werner Kümmel and Johann Mikulicz, both of Breslau. They write in this section on Glossitis in its different forms, Hairy Tongue, Phlegmonous Processes of the Tongue and of the Floor of the Mouth, Pyorrhea of Wharton's Duct, Fibroma, Lipoma, Cystic Tumors, Tumors of the Jaw, Macroglossia and Macrocheilia. The chapter on "Diseases of the Intestines" is in charge of C. A. Ewald, of Berlin, than whom there is none better able to do justice to such a department. Ewald, in this part of Volume IX., discusses most lucidly intestinal ulcers, typhlitis and perityphlitis, carcinoma, sarcoma and lympho-sarcoma, benign neoplasms, habitual constipation, internal incarceration, volvulus, intussusception, obturation of the intestine, compression of the intestine, hemorrhoids, nervous diseases of the intestine, motor, sensory and secretory neuroses, and the treatment of nervous diseases of the intestine. "Hernia" is dealt with by V. P. Gibney and John B. Walker, and very completely is the subject treated. The section on "Diseases of the Spleen" is written by Alfred Stengel, of Philadelphia; that on "Diseases of the Liver" by Mariano Semmola and Carlo Gioffredi; and the chapter on "Diseases of the Gall-Bladder" by John B. Murphy, of Chicago.

Vols. X. and XI. are devoted entirely to "Diseases of the Nervous System," composing what forms one of the most valuable portions of the entire system. The contributors to Vols. X. and XI. are Sanger Brown, of Chicago; Joseph Collins, Chas. L. Dana and Bernard Sachs, of New York; Chas. S. Fere, of Paris; H. T. Pershing, of Denver; C. K. Mills, F. X. Dercum, of Philadelphia; and L. Brums, of Hanover. "Diseases of the Brain" is in charge of Joseph Collins, of New York, who has devoted no less than 258 pages to that subject, writing on, amongst other diseases, cerebral localization, encephalitis in its different forms, diffused sclerosis of the brain, multiple sclerosis, hydrocephalus, diseases of the cerebellum, chronic progressive bulbar paralysis, and asthenic bulbar paralysis. Chas. L. Dana gives about forty pages on Intracranial Hemorrhage, Embolism and Thrombosis. "Tumors of the Brain" forms a section of about sixty pages, and is from the pen of Sachs. Jos. Collins has, in addition to his section on diseases of the brain, contributed several chapters on "Diseases of the Meninges"; and Chas. Fere, of Paris, has contributed different sections on Hysteria, Epilepsy, and Spasmodic Neuroses. Chas. L. Dana gives between thirty and forty pages on the subject of Neurasthenia; Howell T. Pershing a chapter on "The Disorders of Speech," and Sanger Brown one on "The Disorders of Sleep."

The largest and fullest chapter on the subject of "Diseases of the Nervous

System" is that dealing with "Diseases of the Cerebro-Spinal and Sympathetic Nerves," by Jas. Hendrie Lloyd, of Philadelphia. In this section, each nerve, commencing with the olfactory, and ending with the coccygeal nerves, is treated separately, thus making it thorough and complete. "The Trophoneuroses" are written by C. K. Mills, and under this heading the author deals with hemifacial atrophy, hemilingual atrophy, hemifacial hypertrophy, localized atrophies and hypertrophies, Raymond's disease, perforating ulcer of the foot, scleroderma, acromegaly, and adiposis dolorosa.

L. Bruns, of Hanover, and F. Windschied, of Leipsic, were chosen to write the section on "Diseases of the Spinal Cord"; P. G. Möbins, of Leipsic, the one on "Tabes Dorsalis"; and A. Strümpell that on "The Combined System Diseases of the Spinal Cord." A chapter on "Pain," at the end of Vol. XI., is contributed by Lightner Witmer, of Philadelphia. One of the most practical chapters under the heading, "Diseases of the Nervous System," is that by Dr. Lloyd, of Philadelphia, on "Torticollis." The author points out how this disease comes on gradually, though sometimes in the reverse manner. In the usual form there is an initial stage of pain and tenderness in the affected muscles, while these become stiff, and the head, consequently, is held in an awkward, painful position. This spastic or tonic stage after a while gives way to the intermittent or paroxysmal stage. In some cases the contraction is steady and tonic, and in others it is clonic, the muscles jerking the head in a series of short, even, rhythmical contractions. As a rule, the exact muscles affected are one or other or both muscles supplied by the spinal accessory nerve. If it is confined to one muscle, it is the sternocleido mastoid muscle. As a rule, torticollis is not painful, though in most cases it is associated with great mental depression. The course of torticollis is usually obstinate and progressive. The prognosis, especially in young persons, is not necessarily bad. Recovery occasionally occurs under judicious treatment, or even spontaneously. The pathology of torticollis is as yet quite obscure. The disease is usually claimed to be due to some affection of the spinal accessory nerve, but as it frequently extends and involves muscles not supplied by this nerve this explanation is not tenable, in all cases at least. The treatment of torticollis with drugs is, as a rule, very unsatisfactory. Morphine, gelsemium, conium, cannabis indica, chloral, the bromides give only temporary relief, and very often may cause the patient to form the drug habit. Perfect rest in bed should be first of all enjoined, and that for a long time. This gives the muscles complete rest, and is a useful adjuvant to drugs. Electricity is of no value whatever, the author thinks. Surgery gives most relief, the most common operation being the division or the stretching of the spinal accessory nerve. This nerve, according to Keen, may be reached by an incision along either the anterior or posterior borders of the sternocleido mastoid muscle. Keen has also performed resection of the posterior cervical nerves for torticollis, and in three of his four cases he has had good results. These nerves supply the splenius, rectus capitis, and the obliquus inferior muscles.

Volume XII. is devoted to "Mental Diseases of Childhood and Old Age," and is contributed to by Jules Comby, of Paris; Cesare Lombroso, of Turin; P. A. Sollier, of Paris; G. Fielding Blandford, of London; and J. Boy-Tessier, of Marseilles. This volume is replete with the latest information on this important department of medicine. Insanity, idiocy, criminal anthropology and old age form the different sections, and each and all of them are thoroughly instructive. In his section on "Old Age," J. Boy-Tessier gives the most recent views on such subjects as normal senility, the anatomy of the old man, the physiology of senility, causes of senility, the means of combating senility, death from old age, and ordinary diseases in the senile. These volumes of this system are by no means any exception to the rule, and are in every respect fully up to the standard of the previous ones. W. A. Y.

A Manual of Surgical Treatment. By W. Watson Cheyne, M.B., F.R.C.S., F.R.S., Professor of Surgery in King's College, London; Surgeon to King's College and the Children's Hospital, Paddington Green, etc.; and F. F.

BURCHARD, M.D. and M.S. (Lond.), F.R.C.S., Teacher of Practical Surgery at King's College Hospital and the Children's Hospital, Paddington Green, etc. In six parts. Part I. treats of general surgical diseases, including inflammations, suppuration, ulceration, gangrene, wounds and their complications, infective diseases and tumors. Forty-two pages are taken up with a chapter on anesthesia and anesthetics by Dr. Silk. London and Bombay: Longmans, Green & Co., 39 Paternoster Row. Toronto: The Copp, Clark Co., Limited, Publishers, 9 Front Street West. Price of volume, $3.70. The work is dedicated to the Rt. Hon. Lord Lister, LL.D., P.R.S.

The authors have not given a summary of the various methods of treatment, but only the methods which they have found best under the circumstances. When methods of equal value with their own exist they are mentioned, but not at length. All circumstances with which the surgeon is called upon to deal have been, as far as possible, included. Pathology, symptomatology and diagnosis are taken up in a short and convenient manner, but the work is more for the practitioner who has some previous knowledge in these matters.

Part I. contains fifteen chapters, 272 pages of reading matter and 270 illustrations. The table of contents and index are very complete. The work is beautifully written, and the treatment in each case is so fully dealt with that it leaves nothing to be desired. The opening chapter deals with inflammations, both acute and chronic, and the various methods of treatment are given in each case, and, where necessary to a clearer understanding of methods, cuts are given of the various appliances used. The chapter on Ulceration describes eleven varieties of ulcers, and gives a treatment for each.

The chapter on Anesthesia and Anesthetics by Mr. Silk is especially good, and should be read carefully by not only every surgeon, but by every one who gives an anesthetic. The methods of administration, the special indications for each anesthetic and the dangers to be avoided are so carefully and clearly pointed out that they form quite an acquisition to the literature of that important subject. Ether is given the preference over chloroform as an all-round anesthetic. The dangers from ether are said to be mostly of an asphyxial type. It is advised not to give it to patients under twelve, or over sixty years of age. Renal disease is mentioned as a contra-indication for ether, but no mention is made of any dangers arising after the administration from an injurious action on the kidneys. The latest and best forms of inhalers are shown, and the chapter concludes with a very useful description of the different forms of local anesthesia. The preparation of patients for operation, the sterilization of instruments, ligatures, instruments and the surgeon's hands are fully considered, and the most approved technique given.

In the treatment of sepsis, erysipelas and tetanus the various serums are spoken of in favorable terms, and are recommended in conjunction with the general treatment. In erysipelas Kraske's method of multiple scarifications is highly spoken of, and a rational explanation is given, not only for it, but for the old method of making a nitrate of silver ring in advance of the spreading erysipelas.

In the treatment of syphilis mercury is given to the physiological extent in the first and second stages, while pot. iodid is reserved for the third stage. While we think this limitation of drugs correct for the different stages, many, if not most cases, do well on smaller doses of mercury, and without even approaching the physiological effect. The different methods of mercurial administration are given, viz., per orem, injection, fumigation, and by hypodermic injection.

Tuberculosis is dealt with in a separate chapter. The treatment is taken up in a general way, and the special operations for surgical tuberculosis will be dealt with in another volume. The concluding chapter deals with tumors, and gives the prognosis and treatment of the different varieties, together with a very short and concise statement of the pathology and general history of each variety.

We are very much pleased with Part I. of this work, and think it just the kind of book needed by the busy practitioner, who does not wish to wade through

all the theories and various treatments of the larger works on surgery, but wants a work to help him through his various doubts and difficulties, and give him the most advanced treatment of the time with the least amount of research.

W. J. W.

A System of Medicine by many Writers. Edited by THOMAS CLIFFORD ALLBUTT, M.A., M.D., LL.D., F.R.C.P., etc., Regius Professor of Physic in the University of Cambridge, etc. Vol. VII. London: Macmillan & Co., Limited. New York: The Macmillan Co. 1899. Toronto: A. P. Watts.

This volume of Allbutt's "System of Medicine" is devoted to "Diseases of the Nervous System," continued from the latter part of Volume VI. It is divided into "Diffuse Diseases of the Spinal Cord," "Limited Diseases of the Spinal Cord," "Diseases of the Brain," and a short section at the end entitled "Other Diseases of the Nervous System." Under the first section, the contributors are Dr. Frederick Taylor, Dr. Andrew H. Smith and Dr. Batten. Sir T. Grainger Stewart contributes at least three articles to the section, "Limited Diseases of the Spinal Cord," one on Spastic Paraplegia, Friedreich's Ataxia, and a third on Hereditary Cerebellar Ataxia. Dr. Allen Starr writes also in this section, one chapter on Syringomyelia, and a second on Poliomyelitis Anterior Acuta. "Diseases of the Brain" has quite a number of contributors, among them being Dr. Bastian, Dr. Leonard Hill, Dr. Coleman, Dr. Barton, Dr. James Taylor, Dr. Byron Bramwell, Dr. Savage and Dr. Goodall. Under "Other Diseases of the Nervous System," Prof. Bradbury writes a very interesting chapter on Disorders of Sleep, Sir W. Gowers an article on Epilepsy, Dr. Risien Russell being, however, the principal contributor to this department, having articles on Chorea, the Tics, Paramyoclonus Multiplex, Saltatory Spasm, Head Nodding, and Eclampsia Nutans.

A chapter of exceptional merit is that on Cerebral Hemorrhage, as contributed by Dr. Howard Tooth. This article is concisely written and essentially practical. The author claims that there is a striking tendency to heredity in cerebral hemorrhage, instancing a case of a single lady, aged 41, who, during a violent attack of seasickness, became unconscious and died in a hospital, there being afterwards found a large hemorrhage in one of the lateral ventricles. There was no atheroma of the cerebral arteries, and very little of the aorta, kidneys very slightly affected, and heart scarcely at all hypertrophied. Nine members of the family, however, had died in the same way. No period of life is exempt from this disease, but as arterial degeneration is most common in later periods of life, it is after middle age that we find the chief liability to such hemorrhage, and especially between forty and fifty years of age. Women are much less liable to this disease than men. An appreciable percentage of cases occurs in the course of infective endocarditis. The author, in his article, Cerebral Hemorrhage, after taking up the causation, writes of the General Anatomical and Physical Considerations of the Disease, the Pathology and Morbid Anatomy, the Symptoms, Prognosis, Differential Diagnosis and Treatment. The author holds that, beyond the attention to symptoms, there are two main indications for treatment, viz., first, to stop the hemorrhage; and second, to relieve intra-cranial pressure. There are two methods in which the cessation of hemorrhage may be promoted: (*a*) by increasing the coagulability of the blood, and (*b*) by lowering the vascular pressure, even if only for a short time. To lower arterial pressure, two means are at our disposal, local and general. Under local means, the author explains how Horsley and Spencer have shown, by experiment on monkeys, that hemorrhage from the middle cerebral and its branches may be controlled for a considerable time by compression or ligature of the carotid on the same side; and this in spite of the anastomosis of Willis. This would suggest the expediency of trying compression of the carotid, providing the diagnosis is reasonably certain, for it is obvious that such a treatment must be directly contra-indicated in thrombosis. As to general means to bring about a diminution in the arterial pressure, the most potent agent by far is venesection, or arteriotomy of the temporal artery.

W. A. Y.

Hand-Book of Physiology. By W. Morrant Baker, F.R.C.S., and Vincent Dormer Harris, M.D., London, F.R.C.P. Fifteenth American edition. Revised by Warren Coleman, M.D., Professor of Physiology in the Woman's Medical College of the New York Infirmary; Instructor in Clinical Medicine and Materia Medica in Cornell University Medical College; Assistant Physician to Bellevue Hospital; and Chas. L. Dana, A.M., M.D., Professor of Nervous and Mental Diseases in the New York Post-Graduate Medical School; formerly Professor of Physiology in the Woman's Medical College of the New York Infirmary; Visiting Physician to Bellevue Hospital; Consultant to the City Hospital for Nervous Diseases. With upwards of 500 illustrations, including many in colors. New York: Wm. Wood & Co. 1899.

There are few students who became graduates in medicine during the last quarter of a century who are not acquainted with that old stand-by, "Kirke's Physiology." Many there are who can justly claim to have learned all they ever knew of this subject from Kirke. Thousands there are who, but for this work, would never have surmounted the difficulties of a preliminary examination. In this, the fifteenth American edition, the book has been slightly rearranged as far as the order of the chapters is concerned. The chapter on secretion has been placed before that on food and digestion. Professor Dana has thoroughly revised the section on nervous diseases, rendering this part of the work still more complete and acceptable. The body of the text also contains alterations here and there, but of a minor character. In the chapter on the motor areas of the cerebral cortex, Professor Dana shows beyond a doubt that, by experiments upon the brains of various animals by means of electrical stimulation, there are definite regions of the cerebral cortex the stimulation of which produces definite movements of co-ordinated groups of muscles of the opposite side of the body. It is naturally of great importance to discover how far the results of experiments upon the dog and monkey hold good with regard to the human brain. So far, however, it has been possible to localize motor functions in the frontal and ascending parietal convolutions only, to the convolutions which bound the fissure of Rolando, and to those on the inner side of the hemispheres which correspond thereto, and possibly to the frontal lobe in front of the ascending convolution. Destruction of these parts causes paralysis, corresponding to the district affected, and irritation causes convulsions of the muscles of the same part. A number of cases are on record in which aphasia has been associated with disease of the posterior part of the lower or third frontal convolution on the left side. This condition is usually associated with paralysis of the right side. This district of the brain is now generally known as the motor area, and there seems no doubt whatever that from this area pass the nerve fibres which proceed to the spinal cord, and are there represented as the pyramidal tracts. This is the reason, no doubt, that movements are produced on stimulation of the white matter after the superficial gray matter of the animal's brain has been sliced off. This chapter is well illustrated, in many places in colors, and altogether the entire work is one of great value. W. A. Y.

Materia Medica, Therapeutics, Medical Pharmacy, Prescription Writing, and Medical Latin. A Manual for Students and Practitioners. By William Schleif, Ph.G., M.D., Instructor in Pharmacy in the University of Pennsylvania. Series edited by Bern B. Gallaudet, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, New York; Visiting Surgeon, Bellevue Hospital, New York. New York and Philadelphia: Lea Brothers & Co.

Tastefully bound in red cloth, thereby easily singled out as a book of reference, this volume, remarkable rather for its conciseness than for its size, will prove of great service to the busy practitioner as well as a text-book to the student. The contents are arranged under the several headings of imponderable remedies, pharmacological remedies, actions and modes of administering drugs; weights and measures; prescription writing; classification of drugs. Under the latter classification some pages are devoted to the Belladonna group, that

deadly nightshade indigenous to Europe. The whole of the Belladonna root contains the narcotic principle. The preparation of the leaves is described, then the physiological action of the drug is shown upon the nervous system; in general, atropine may be considered to stimulate the *sympathetic* system, and to depress the motor, and in a lesser degree the sensory nerves, thus diminishing the reflexes. It is not a true hypnotic. Sufficient doses excite the cerebrum, taking the form of an active delirium, followed, if the dose be toxic, by stupor deepening into coma. In its action upon the heart, if given in large doses it may prove a cardiac paralyzer. As to its effect upon respiration it is one of the most potent measures for stimulation of the respiratory function. The temperature is increased by medicinal and lowered by very large doses, probably by an action upon the heart centre; perspiration is decreased; the effect on urinary and intestinal secretion is in doubt, though the urine is probably increased from the diminution of perspiration. Among the cardiac stimulants digitalis finds an important place. The foxglove is cultivated both in Europe and America, but the European leaves are considered the better. In therapeutic doses it produces a strong, slow, full pulse, and raises the blood pressure. Death occurs usually through systolic arrest, a tetanic condition from over-stimulation of systole; rarely, from diastolic arrest, in which case pneumogastric stimulation stops the heart. The nervous system is not affected by medicinal doses. Large doses are nauseating. In acute poisoning empty the stomach and give whiskey or ammonium carbonate, and place the patient in a recumbent position. The urine is increased in amount. By many the theory is held that after the continued administration of the drug sudden alarming symptoms may be developed. Others claim that these effects are due to the slow elimination of the drug, so that the doses overlap each other.

Medical books are now so many, and new fields of scientific research so numerous, that it would indeed be a difficult and unwilling task to exclude any recent work from an up-to-date library; in the case of handy text-books, at least, the policy would be a very unwise one, alike to student and physician.

The Hygiene of Transmissible Diseases: Their Causation, Modes of Dissemination, and Methods of Prevention. By A. C. Abbott, M.D., Professor of Hygiene and Bacteriology, and Director of the Laboratory of Hygiene, University of Pennsylvania. Illustrated. Philadelphia: W. B. Saunders. Toronto: J. A. Carveth & Co. Price $2.00.

"The frequency with which requests are received for information concerning the detailed management of transmissible diseases is in part the reason for the publication of this book." These are a few of the modest and well-chosen words with which this volume makes its bow to the public. And an interested medical public it will surely find awaiting to read its pages. Incidentally a section, illustrated, on the causation of disease, and the reader follows naturally into section 2 upon transmissible diseases. Among this number typhoid fever finds a place. The author states plainly that this disease is not contagious, but infection occurs by way of the alimentary tract, *i.e.*, "it results from actually swallowing materials that have come directly or indirectly from the bowels of individuals affected with the disease." Also under the non-contagious, infectious diseases, cholera is dealt with at some length. Tuberculosis is referred to as an infectious disease, resulting from the presence in the tissues of a specific micro-organism, *bacillus tuberculosis*, discovered by Koch in 1881-82. To the Bubonic plague a chapter and an illustration is given. Among other departments treated of are suppurative and septic infections: Venereal diseases, leprosy, tetanus, anthrax, actinomycosis, madura foot (tungus disease of India; mycetoma), small-pox, measles, scarlet fever, malarial fever, dengue, typhus fever, relapsing fever; freely illustrated by diagnoses, maps, etc. In a chapter on rabies the author states that numerous efforts have been made to detect the etiological factor of rabies, but as yet no trustworthy results have been reached. Still the behavior of the tissues are rich in the poison corresponding in so many ways with that of tissues containing a living virus that there is little doubt that the disease originates with the invasion of a specific micro-organism. "Diseases Due to highly-developed Animal Parasites" is the subject of the closing chapter

of section 2. The third section is devoted to "Prophylaxis in general Against Infectious Diseases." Few physicians of to-day are not deeply interested in the public health, and trying individually and collectively to enforce the laws that govern long life and health to the betterment of the great mass of humanity. To all such this book of Dr. A. C. Abbott's will prove of more than passing interest. B. L. R.

The Treatment of Pelvic Inflammation Through the Vagina. By WILLIAM R. PRYOR, M.D., Professor of Gynecology, New York Polyclinic; Consulting Surgeon City (Charity) Hospital; Visiting Surgeon St. Elizabeth Hospital. Philadelphia: W. B. Saunders, Publisher. Canadian Agents: Carveth & Co., Toronto.

This admirable little book has been written at the request of the gentlemen who have attended Dr. Pryor's lectures in the New York Polyclinic. There is no doubt that inflammatory disease of the pelvis constitutes the large majority of gynecological lesions, and consequently the subject is an important one. The book will be found valuable to the practitioner, under whose care so many of these cases first present themselves, and a careful perusal of its pages will afford a clearer and more intelligent insight to many practitioners in the management of these sometimes troublesome and difficult cases.

As the name designates, this work is chiefly devoted to treatment. Sufficient attention, however, is given to the pathology and diagnosis of pelvic diseases for all practical purposes, and although the treatment advocated is largely aggressive surgery, palliative measures are given due attention when operative interference is not advisable.

The results of the author by the vaginal route are certainly encouraging and satisfactory, and will, doubtlessly, assist in bringing this means of attacking pelvic lesions into more favorable consideration.

The author's improved table and instruments, which are carefully described, are certainly of material assistance, and will help to overcome some of the objections to operating in this manner. He mentions in his preface, "that he has put down every little detail, no matter how insignificant, which might be of service." This fact adds greatly to the value and usefulness of the work, and the illustrations, which are numerous, and most of them clear and descriptive, help greatly in the comprehensiveness of the text.

The work will be found valuable and useful, both to the expert and specialist, as the author is evidently imbued with the true spirit of scientific investigation and experimentation, and especially to the general practitioner, who will arise from the study of the work with a greatly increased knowledge of pelvic inflammations. G. T. M'K.

A Compend of the Practice of Medicine. By DANIEL E. HUGHES, M.D., Chief Resident Physician Philadelphia Hospital; late Demonstrator of Clinical Medicine in the Jefferson Medical College of Philadelphia, etc., etc. Sixth physician's edition. Thoroughly revised and enlarged. Including a section on Mental Diseases, and a very complete section on Skin Diseases. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1899.

We can very easily remember the first edition of this book, and at once recognize how greatly it has increased in size in every new edition published. As the name indicates, the author originally intended that the work should be for students mostly, and not in any way replace the text-books proper. But as Dr. Hughes noticed that each and every edition was larger than its predecessor, he came to find that his book was receiving so encouraging a sale that it would not be long ere it would be purchased in place of the regular text-book at the medical colleges. Judging from the appearance and the completeness of the material contained in the sixth edition, we augur a still larger sale for the book than ever. The addition of the sections on Skin and Mental Diseases will enhance the value very much. Under the latter, the author takes up melancholia, mania, epileptic insanity, circular insanity, katatonia, delusional insanity, paranoia, general paralysis and dementia. Under each disease, the author gives shortly but concisely the causes, pathology, symptoms, diagnosis, prognosis and

treatment. Under Diseases of the Skin, Dr. Hughes gives the principal affections with the same attention to detail as under Mental Diseases. The author is to be congratulated upon this last and best edition of his work.

International Clinics. A quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology and Dermatology, and specially prepared articles on treatment and drugs. Edited by JUDSON DOLAND, M.D. (University of Pennsylvania), Philadelphia. Vol. 2. Ninth series. 1899. Philadelphia: J. B. Lippincott Company. Canadian Agent, Chas. Roberts, 1524 Ontario Street, Montreal.

In the space at our disposal it is impossible to give a complete list of the contributions to Vol. 2, but we have noticed a great many familiar names. Among them are Fournier, Fraenkel, V. P. Gibney, H. A. Hare, König, Lassar, Von Bergman, and W. W. Keen. An excellent lecture on "The preventive treatment of paternal syphilitic heredity during pregnancy," by Alfred Fournier, appears. Von Bergman describes the steps of an operation for "Double hare-lip with a projecting inter-maxillary bone." W. W. Keen gives a brief report of several interesting cases: one of subdural drainage of the left ventricle for hydrocephalus; one of extrophy of the bladder. König gives a series of cases of "Shot wounds in the heart region." Lassar relates an interesting series of cases of "Prurigo: indurated sore of the lower lip in a cornetist"; Pityrian's Rosea; injuries, irritation and localization of syphilitic lesions.

The book-making, like all that of the Lippincotts', is well done, the type good, and the book is of convenient size. If one might criticise, it would be as to the proof-reading, which is in some instances defective. As to the selection of contributors, one feels prone to suggest that the addition of British and Canadian writers would increase the usefulness of an already useful work.

F. N. G. S.

Over 1,000 Prescriptions or Favorite Formulæ of Various Teachers, Authors and Practising Physicians. The whole being carefully indexed, and including most of the newer remedies. Cloth. 300 pages, postpaid $1.00. The Illustrated Medical Journal Co., Publishers, Detroit, Mich.

This is the second edition of this handy manual, and is just from the press it has nearly 100 pages of new matter added. As the practical worth of this kind of a book consists in its having a handy and complete index, this book has it, for some sixteen pages of small type are devoted to this object, and some of the lines have as many as twenty different references to as many different formulæ; this would go to show that there are about 2,000 different prescriptions given in the volume. In other words, taking the price of the book into consideration ($1.00), it would argue that there are furnished some twenty different prescriptions for one cent. We notice that many of the newer remedies are among the prescriptions, thus bringing the treatment of many of the diseases down to date. Both old and new writers of both home and foreign countries are represented among its formulæ.

Blank pages are frequently introduced, so that a handy place is furnished for recording any new prescription that one might wish to preserve. The printed index will index all such pencilled additions, if care is taken to write them opposite a page with a formula for similar disease; this would then save the bother of indexing the pencilled additions.

Enlargement of the Prostate. By C. MANSELL MOULLIN, M.D. Second edition. London: H. K. Lewis, publisher. 1899.

This a good book! Any surgeon interested in prostatic diseases, and any practitioner upon whom may devolve the care of patients who have reached what used to be termed catheter life, will make no mistake in its purchase. Since the classical essay by Sir Henry Thompson passed out of the realm of practical usefulness and became simply of historical value, we have had nothing to equal or to approach in the literature of this subject the book before us. All the latest investigations regarding the genital function of the prostate, and all

the surgical substitutes for repeated use of the catheter, are discussed and carefully and candidly weighed by one whose experience has been ample, whose reasoning is clear, and whose judgment, as a rule, is sound, safe and conservative. We commend the work without reserve, and hope to see successive editions appear as it becomes better known. N. A. P.

A Compend of Gynecology. By Wm. H. Wells, M.D., Adjunct Professor of Obstetrics and Diseases of Infancy in the Philadelphia Policlinic; Instructor of Clinical Obstetrics in the Jefferson Medical College; Fellow of the College of Physicians of Philadelphia and of the Gynecologic Section thereof; late assistant in the Out-Patient Gynecologic Department of the Jefferson Medical College Hospital. With illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1899.

Since the publication of the first edition of this book, and which received so encouraging a reception from the medical profession, operative gynecology has made such strides as to demand of several additions to this work, going more into the detail of this important department. We notice also that the author has given the most recent methods of both diagnosis and treatment, with quite a number of new illustrations. For examination purposes, we can conceive of no better investment than the price of Dr. Wells' "Compend of Gynecology."

American Pocket Medical Dictionary. Edited by W. A. Newman Dorland, A.M., M.D., Assistant Obstetrician to the Hospital of the University of Pennsylvania; Fellow of the American Academy of Medicine, etc., etc. Containing the pronunciation and definition of over 26,000 of the terms used in medicine and the kindred sciences, along with over 600 extensive tables. Second edition. Revised. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899. Toronto: Carveth & Co.

It only took a matter of six months to exhaust the last edition of this useful work, so that Dr. Dorland took this opportunity of revising, and, in many instances, adding to the book. A large number of new words and terms have been added, thus rendering the work one of exceeding value and completeness. The second edition will doubtless meet with as large a sale as its predecessor.

Quiz Compends! No. 8. A compend of the diseases of the eye and refraction, including treatment and surgery. By George M. Gould, A.M., M.D., and Walter L. Pyle, A.M., M.D. Second edition, 80 cents. Philadelphia: P. Blakiston's Son & Co.

What's in a name? The title, "Quiz Compends," has always been to us a red rag. Had the name of George M. Gould not been on the title page, into the waste basket the compend would have gone. This compend is full of good common-sense and practical points, and it is not a quiz; wherefore, Drs. Gould and Pyle are forgiven. Good wine needs no bush, though hidden in a "sample parlor." J. M. M.

The Sexual Organs: Their Use and Abuse. By J. E. Heller Hett. Published by the author, Berlin, Ont., 1899; Buffalo, N.Y. Paper binding, 75 cents.

Dr. Hett's book, which is dedicated to single and married young and middle-aged men and women, is an endeavor to place the basal facts of sexuality in man in a plain manner, so as to be understood by the ordinary reader. He also indicates the various venereal diseases, and the physical and moral evils arising from an improper use of the sexual organs. In the second part of his book the author describes laziness, anger and other evils which accompany the perversions of sex, and shows how they may be resisted and overcome. J. J. C.

Golden Rules of Psychiatry. By Jas. Shaw, M.D., Queen's University, Ireland, formerly Medical Superintendent and Co-Licensee, Haydock Lodge Asylum, Lancashire, etc. Golden Rule Series, No. V. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd.

"Golden Rules of Psychiatry" give, in vest-pocket size, many hints which ought to prove of value to the physician in examining a patient for insanity. The small book gives a great deal of information on this subject in the most condensed possible form.

Selected Articles.

ON THE TECHNICAL CONSIDERATIONS INFLUENCING THE SURGICAL TREATMENT OF APPENDICITIS OCCURRING DURING PREGNANCY.*

BY ARPAD G. GERSTER, M.D., NEW YORK,

Surgeon to Mount Sinai Hospital; Consulting Surgeon to the German Hospital, New York.

During the year 1898, 148 cases of appendicitis were admitted into the surgical department of Mount Sinai Hospital. The diagnosis was verified by operation in all of these cases with the exception of 10, in which operation was declined by the patients. Of this number 80 were in men, 38 in women, and 30 in children under 12 years. This proportion can be accepted as fairly representative of the numeric relation of the disease in the sexes, showing that men are affected by the disease more than twice as often as women. Up to within a few years the true balance was still more depressed on the female side by the undoubted fact, so well pointed out by Dr. Mundé, that every inflammation on the right side of the female pelvis, suppurative or non-suppurative, was invariably attributed to disease of the uterine appendages. Thus it came that it was universally believed that women enjoyed a remarkable immunity from appendicitis. With the knowledge of this fact it is not difficult then to comprehend that a coincidence of *pregnancy* with *appendicitis* was not recognized, and dealt with accordingly, until 1894, when Mundé† published a case successfully operated upon by himself. Two years later Abrahams‡ read a paper before the New York County Medical Association, in which he was able to give a report on 17 cases, in 12 of which the diagnosis was verified by operation. These operations were followed by the death of 7 patients, a most formidable fatality. In 5 other cases, which were evidently of a milder type, no operation was done, and these patients all recovered from the then existing attack.

The papers so far written on this subject,§ though meritorious, inasmuch as they all insist on an energetic interference whenever the conditions require it, fail to deal adequately with the technical questions that confront the practitioner, a failure explained and

* Read before the Orange Mountain Medical Society, January 20th, 1899, and contributed to the *Philadelphia Medical Journal*, February 14th.

† *Medical Record*, December 1st, 1894, p. 678.

‡ *American Journal of Obstetrics*, Vol. XXXV., No. 2.

§ Abrahams. *Ibid.*

excused by the paucity of the material. Knowing the difficulties the surgeon meets in dealing with the many variations in the character of appendicitis, ever full of surprises, it will richly repay the time spent to consider, in a rapid manner befitting the occasion, the peculiar circumstances characterizing appendicitis during pregnancy. My object will be briefly to survey the salient features, to suggest rather than to exhaust a most interesting and comparatively new subject.

Diagnosis.—The difficulties of a differential diagnosis, often considerable in the absence of pregnancy, may become nigh insurmountable when the abdomen is filled with a gravid uterus. Great circumspection and a conscientious exhaustion of all the diagnostic means at disposal will, in most cases of early pregnancy, enable the attending physician to arrive at a positive conclusion. Bimanual palpation per vaginam and per rectum will often yield a positive result, clearing up the question, "Are the uterine appendages involved or not?" Normal parametrium of the right side, the relatively high location of either the characteristic point of spontaneous and pressure pain, or of a tumor, together with the well-known group of morbid symptoms of a general character indicating a local peritonitis, will lead directly to the proper diagnosis.

But when the right parametrium is clearly involved, presenting a painful mass holding close relations with the uterus, there may still be an appendicular morbid process. The deep situation of a long appendix, lying in contact with the womb and it appendages, is not uncommon, and its inflammation may produce physical conditions that the finger cannot distinguish from those produced by suppurative processes that have their primary seat in tube or ovary; or, a circum-appendicular abscess may have gradually extended down to the vicinity of the uterus from above; or, finally, an appendicular infectious process may have directly communicated itself by contact to the uterine appendages, establishing a complication, not altogether rare, of appendicitis with septic salpingo-oophoritis.

But even in these difficult cases, the good observer may elicit the truth by paying due attention to the clinical aspects of the general condition. It should be borne in mind that, with the exception of cases occurring after childbirth, a sepsis as intense as that characteristic of perforative appendicitis is extremely rare in suppurative or even perforative salpingo-oophoritis. Previous attacks which were well observed, may give a significant hint one way or the other. So much can be said, however, that, as with the progress of gravidity the size of the uterus increases, crowding aside the other viscera, a precise diagnosis is apt to become more and more difficult, and even impossible, grave symptoms of great urgency compelling the surgeon to make an exploratory incision, a last resort disliked by the careful diagnostician.

Before leaving this subject it is necessary to mention a condi-

tion observed by McBurney, Bull, Mundé, and myself, simulating appendicitis. I mean the presence of a small ovarian tumor of the right side, having a twisted pedicle causing a complex of symptoms very suggestive of acute appendicitis. In the earlier stages of pregnancy a careful examination under anesthesia will generally clear up the diagnosis. In a case of far-progressed gravidity, only the probatory incision can give the desired light.

Indication and Prognosis.—The prognosis in appendicitis complicating pregnancy depends in the main, first, upon the character of the inflammation; secondly, the stage of pregnancy, and, finally, upon the time and means taken to combat it.

It is undeniable that, as Abrahams shows, a respectable proportion of all cases of the disease in pregnant women is not of a malignant type. In these cases a purely medicinal or expectant treatment would be the proper course to adopt, were we always able authoritatively to identify these cases as mild ones. But just here lies the difficulty. That the fatality among the bad cases is very high, is shown by the fact that, according to Abrahams, of 12 women operated upon 7 have succumbed to septic peritonitis. The histories of all of these cases show, however, that the operations were performed very late, and in the presence of extremely grave local and general disturbances. There are sufficient data at our disposal to prove that the operation for the early stages of appendicitis presents no serious difficulty or risk in early or late pregnancy. Indeed, the safety of both mother and child will be insured by nothing better than radical measures directed toward the elimination of present or future danger lurking in a diseased appendix. As a rule, the early stages of pregnancy will not be interrupted, and if the operation occur near the end of the term, adequate and reliable measures can be taken to make delivery safe. A timely, that is, early, operation will usually deal with a process limited to the interior of the unperforated appendix; will eliminate the focus of infection, and thus remove the danger threatening the fetus from prolonged septic fever; will eliminate the dangers of perforative peritonitis; and last, but not least, will permit a complete and sound closure of the abdominal wound, an extremely important point in the later stages of pregnancy, when, in the presence of an open wound maintained for purposes of drainage, an accidental escape of the intestines may take place during the expulsive efforts of parturition. We shall see that, when the abdominal cavity can be securely closed by suture, parturition may, and generally will be, completed without hindrance to its own progress or damage to the suture, and that the ultimate and smooth healing of such a well-sutured wound is nowise interrupted by the violent efforts of the abdominal walls observed during the birth of a first child.

On the other hand, when perforation has already taken place, and an abscess has formed, the conditions are extremely serious, especially during the end of pregnancy. Usually, a portion of the

wall of this abscess will be formed by the gravid uterus itself. Supposing that such an abscess is evacuated by the surgeon, a most embarrassing element is introduced into the after-treatment by the circumstances that with the setting in of labor, existing adhesions may be ruptured; that the infected surface of the contracting uterus itself will undergo a marked displacement downward, and may spread infection to hitherto intact parts of the peritoneum.

But this is not all. It has already been shown that the maintenance of drainage during the act of parturition is a serious matter, on account of the tendency of the viscera to escape from the abdominal cavity during expulsive efforts. To guard against this danger effectually, yet in such a manner as not to interfere with proper drainage, is another problem not easy to solve.

To recapitulate, we may say then, that though there are and must be a certain number of cases of appendicitis occurring during pregnancy, in which it may be safe and proper to pursue a waiting policy, yet, in view of the tremendous dangers threatening patient and fetus from a far-progressed septic appendicular process, especially during the later stages of gravidity, it may be safely laid down that the prognosis is very uncertain at best, and that certainty of a favorable prognosis depends in direct ratio upon the earliness of the diagnosis made by means bloodless or bloody, and upon the promptness and thoroughness of the surgical measures taken to fulfil the indications.

Treatment.—As hinted at before, while most of the meritorious papers that treat of this subject lay great stress on the indication, that is, they, whenever the symptoms are progressive, agree in urging an early operation, their recommendations as to the manner in which the technical problem is to be attacked, are too general, hence rather vague, lacking enough precision for the guidance of him who is called to act in similar emergencies without previous experience.

For the sake of clearness we shall endeavor to define and group the various pathologic states, upon the correct appreciation of which must be based a rational treatment.

(1) *Appendix imperforated; peritoneum not seriously infected. Absolute closure of wound permissible.* In the earlier as well as in the late and latest stages of pregnancy it will be proper to remove the appendix as soon as local and general symptoms of growing severity manifest a progressive tendency. A high pulse, vomiting or nausea, the characteristic local pain, spontaneous and on pressure, in the right iliac fossa, a tumor not involving the parametrium,—all summon us to prompt action. And the problem will be a simple one. The free or slightly adherent appendix can be easily found, freed and brought out through a comparatively small incision, tied off with catgut, the stump thoroughly charred with the actual cautery or cauterized with pure carbolic acid, dropped back, and the wound closed. Pregnancy will not be

interrupted by these steps, and a trustworthy suture will restore the integrity of the abdominal wall. Though McBurney's incision, consisting of a mere longitudinal separation of the fibres of the several muscular layers, can be practised and may be successful, my experience does not extend to its employment in cases of pregnancy. In the three cases that came under my care, one at the end of the second month, one in the fifth month, the last at the end of the eighth month, the following procedure was successfully put in effect.

The method described by several surgical authors, notably not long ago by Kammerer, consists in making a longitudinal incision near the outer edge, but still within the limits of the right rectus muscle. After division of the skin and the aponeurosis of the external oblique, the anterior portion of the sheath of the rectus is opened, so that the edges of the incision through the external aponeurosis and the sheath of the rectus should be well distinguishable and fit for the application of an individual suture. Now the rectus is liberated and pulled aside towards the median line by a blunt retractor. One, two or even three oblique strands, each consisting of vessels and nerve, are seen traversing the field. These should be divided between two artery-forceps only so far as necessary to yield adequate space, and the vessels ligated. Should it be necessary to extend the incision downward, care must be taken not to injure the epigastric vessels, which, carefully exposed, can be easily displaced nearly two inches downward by a blunt retractor. Now the transversalis fascia and peritoneum are opened, and the appendix is removed in the usual way. After this comes the closure of the wound, the manner of which will vary somewhat according to the stage of pregnancy. In the early stages it is better simply to endeavor to restore the abdominal wall so as to get a solid and reliable union against the expected delivery at full term. First, put in as many retention sutures of silkworm gut, at intervals of about an inch, as the length of the incision requires, leaving them, however, open for the time being. These should not be more that three-quarters of an inch from the edge of the wound, and ought to include all the layers of the abdominal wall. After these are ready, the peritoneum and fascia transversalis, here forming the posterior portion of the sheath of the rectus, are united by a running chromicized catgut suture. Then the rectus is permitted to slide back into place, and the anterior portion of the sheath is closed by a similar suture. Then the aponeurosis of the external oblique is likewise closed, followed by suture of the skin. Thus there are brought together the components of the abdominal wall in the same order as they were severed. To relieve all these lines of suture from all possible strain, the retention sutures are closed by applying either buttons or quills, thus additionally relieving the line of sutures from transverse pressure or strangulation, caused by the ordinary surgical knot. If the asepsis is faultless, the wound heals kindly, layer to

layer in the anatomical order, and on the seventh or eighth day, the button or quill sutures can be removed. The healed wound is further protected for another ten days by adhesive straps armed with tape, which are tied over the dressings. In both my cases of appendicitis, in which the operation was done during the first half of pregnancy in primiparæ, the fetus was delivered at term, and the cicatrix admirably withstood the strain of parturition.

Similar is the procedure when the operation must be done near the completion of term, with this difference only, that proportionately more retention sutures are put in with a view towards the possibility of labor setting in before the wound is firmly united. Button-sutures are applied at intervals of about one-half to three-quarters of an inch, the catgut sutures being identical with those previously described. My experience in Case I. has demonstrated that when labor set in 28 hours after the completion of the operation done at the end of the eighth month of pregnancy, it was carried in 4½ hours to a successful termination by the delivery of a viable child. The sutures held very well, indeed, did not cause pain to the primiparous patient, and, examined immediately after the expulsion of the placenta, looked as when applied. There was no hematoma, and the wound healed smoothly, leaving an inconspicuous scar. It is probable that the same would have occurred had a normal delivery taken place at the end of term.

The question, Why did labor set in in this case directly after the operation? is answered by the circumstance that an ovarian tumor was removed at the same time. The irritation by the ligature of the muscular fibres that run from the cornu into the tube is an adequate explanation. Could this have been avoided, it is very probable that gravidity would have extended to full term.

Hitherto our conclusions were based upon the sound basis of actual experience. They are borne out also by analogy derived from the large number of cases in which abdominal tumors of various character were removed during the progress of pregnancy.

What is outlined in the following is only a plan of action to be adopted when circumstances should demand. Yet an earnest endeavor will be apparent to base every step of the technic upon safe principles universally accepted by modern surgeons.

(2) *Appendix is gangrenous or perforated, or both, the peritoneum is more or less septically infected. An abscess is present.* In the early stages of pregnancy this condition of things will not materially interfere with the plan of treatment now usually bestowed on such cases. Free exposure of the focus of infection; protection of the adjacent normal peritoneum by a carefully arranged wall of packings from contact with pus or ichor; removal of the appendix if this can be done with safety; and subsequent drainage by gauze-wicks or tubing. The wound is closed by through-and-through sutures so far as possible; that is, so as not to interfere with drainage. If the existing sepsis does not destroy the life of the fetus, and is effectually cut short by a thorough

operation, term may be completed. The wound will heal in part by granulation, and this circumstance may lead to the formation of ventral hernia, which, however, need not seriously interfere with safe delivery.

Much more formidable is the state of affairs if a woman is unfortunate enough to contract a perforating appendicitis with septic local peritonitis during the last stages of her pregnancy; and the gravity of affairs is the more pronounced the nearer she has come to full term. Great circumspection and a correct technic must come into play if the lives of mother and child are to be preserved. The problem to be solved will consist here of several factors;

First, septic matter in the shape of pus and dead tissue must be eliminated.

Second, adequate drainage must be maintained under peculiarly difficult conditions, these being dependent upon the local changes wrought by a contracting womb.

Third, effective measures must be taken to prevent the accidental expulsion of intestine during labor, yet so as not to interfere with indispensable drainage.

First of all, then, septic matter must be exposed and eliminated. To do this thoroughly an adequate and, especially, a *low-reaching* incision is absolutely necessary. It should enable the surgeon to survey and explore every part of the infected area, so as not only to permit pus to escape from one cavity, but to give some assurance that no secondary abscess has been overlooked and left behind to burst and infect. If the appendix is easily reached and its situation accessible, it should be removed. But the principal care should be directed towards ferreting out and *not overlooking* pockets or separate abscesses. Prior to evacuation the healthy parts of the peritoneum must be carefully protected by packings.

Having satisfied ourselves that the work of evacuation was thorough and complete, the question arises, how to establish and maintain good drainage not only at the present moment, but also should labor set in.

The difficulty, as pointed out by Abrahams, lies in this, that one of the walls of the abscess being formed by the uterus, labor itself, but principally uterine contraction following delivery will lead to a general shifting of relations, to the severance of protective adhesions and hence to a possible spread of infection. Furthermore, that part of the infected uterine surface which was on the level of the pelvic brim, will descend after delivery to the bottom of the small pelvis, thus becoming considerably more remote from the primary incision. Hence the recommendation to extend the incision well down to Poupart's ligament.

To accomplish the object in view it will be necessary to line and fill the entire cavity of the abscess with a carefully arranged systematic packing of iodoform gauze, providing each recess and pocket with an individual wick, the ends of all tampons to be

brought out through the external incision. Experience teaches that gauze packings soon become matted to the surfaces they touch, and for a number of days this adhesion is quite intimate, requiring considerable traction to dissolve it.

If the surgeon had to do only with coils of intestines, such a packing would be perfectly reliable and adequate. But in view of the impending evacuation of the gravid womb, and its inevitable change of size, shape, and location, a still more reliable safeguard is necessary. The packing which is in contact with the infected surface of the uterus, must be so arranged that it may, under all circumstances, follow the changing viscus, maintaining relative positions during and after delivery.

To secure this, I propose to employ here an expedient which I have successfully used in operations performed for the excision of tumors from the oral cavity, notably upon the tongue, the floor of the mouth, and the pharynx. Here, raw and continually shifting surfaces of considerable extent had to be protected against the perpetual danger of contact with the poisonous elements of saliva and of vomiting matter, until a protective barrier of sturdy granulations should have arisen. Repeatedly it happened, that during retchings and the efforts at deglutition, even Bilroth's adhesive iodoform-gauze became detached and came away long before it was safe to leave the parts unprotected. These experiences finally induced me to stitch a thin "mattress" of gauze directly to the surfaces to be protected by a running suture of catgut, a little additional labor well repaid by the security it gave to the packings.

The analogy of conditions impels me to propose the employment of a similar measure to the field now under discussion. Four layers of iodoform gauze should be exactly adopted to the uterine surface of the abscess cavity, and should be stitched to the peritoneal covering of the organ by a running catgut suture. The redundant skirts of this lining should then be gathered up, filled with a loose packing of additional gauze according to the plan of Mikulicz, and brought out through the external wound. It may be fairly assured that such a packing would follow the uterus wherever it may retract.

It remains now to consider what steps are necessary to avert an accidental expulsion of intestine during the efforts of labor. It is known to what an energetic extent uterine contraction is aided and supplemented towards the close of parturition by contractions of the abdominal muscles, the object of which supplementary work is to increase intra-abdominal pressure. A more or less gaping incision at the bottom of the abdominal wall offers, at such a time, an obvious point of lessened resistance, and may, nay almost certainly will, be the route by which the slippery and insinuating coils of gut will succeed in escaping. True, the vast experience gained in the treatment of suppurative appendicitis tells that in ordinary cases a well applied packing reinforced by strips of adhesive plaster and a snugly-fitting binder does not interfere

much with efforts of coughing and vomiting, and is a sure preventive of the accidental expulsion of gut. But the labors of parturition are infinitely more energetic and persistent, and certainly demand additional safeguards.

There is another thing to be considered, and that is, that the very fact that the abdominal wall contains a gap, must interfere with the energy of muscular contraction, lacking in the indispensable factor of existence exercised by the abdominal contents. To bring out the full force of the abdominal muscles, the viscera must be safely and firmly confined.

By sewing up the wound securely over the packing as soon as labor begins, escape of gut will be prevented, and the necessary resistance created, but the objection will arise, that drainage will be shut off for an indefinite period of time, and by this, at once the plan must be condemned.

Means, then, to confine the intestines must be found, which, at the same time, will not interfere with drainage. And this can be done in the following manner: As soon as the packings are in their place and their ends are brought out of the external wound, the edges of an iodoform gauze compress of about eight layers are slipped in all around under the parietal peritoneum until the compress is spread out evenly, occluding the abdomen like a diaphragm. Now the edges of this diaphragm are firmly stitched to the full thickness of the abdominal wall all around with rather stout silk, thus supplementing the defect in the abdominal wall by a resisting sieve, which, while safely retaining the intestines, will yet permit the free escape of morbid secretions during the time of labor. So soon as the birth is finished, this diaphragm can be removed.

The histories of parturient cases observed by me are these:

Case I.—*Pregnancy at the end of the eighth month; history of many mild attacks of appendicitis, followed by a violent attack; laparotomy; removal of small dermoid cyst of right side (twisted pedicle), and of an adherent appendix, inflamed through juxtaposition; premature labor, safe delivery; recovery without ventral hernia.*

Mrs. C. K., aged 23, primipara, had, at frequent intervals during and before her pregnancy, suffered from attacks of violent pain in the right iliac fossa, which were looked upon as due to appendicular colic or mild seizures of appendicitis. On the patient's admission it was stated, that since two days the old pain had recurred with greater intensity than ever, accompanied by severe and frequent vomiting and great dejection. The abdomen was found occupied by the enlarged womb of a size proper to the end of the eighth month of pregnancy; palpation by the rectum and the vagina yielded, on account of the presenting head of the fetus, negative results, the only local symptom of significance being the rigidity of the abdominal wall over the right iliac region, and, on pressure, an exquisite pain corresponding to the space above and in front of the anterior upper rim of the iliac crest. The pulse

had been rapidly rising, and was then 136 per minute, though the temperature was only 100.4° F. in the rectum. The constant vomiting, a growing pulse rate, and ominous facial expression determined an immediate operation, done in the presence of Dr. Mundé, at Mount Sinai Hospital, December 3rd, 1897, at 11 p.m. The incision along the outer edge of the right rectus gave exit to a large quantity of bloody serum. As soon as the pregnant womb was rolled aside, a small, flattened, blue-black tumor became visible, occupying the deeper parts of the right iliac fossa, proving to be a dermoid cyst, twisted on its long pedicle. Closely adherent to it, and much congested, the appendix was found to follow it on being withdrawn, and both cyst and appendix were together removed, the ligated pedicles being thoroughly seared with the actual cautery. The appendix was sharply bent upon itself, atresic near its base, and much distended by turbid, sanguinolent fluid. Adhesion must have evidently taken place after the twisting of the cystic pedicle.

As the ligature securing the latter lay close to the cornu of the pregnant uterus, it was justly expected that uterine contractions and expulsion of the fetus might soon follow. Hence the closure of the abdominal wound was attended to with the greatest care, so as to guarantee the durability of the sutures under the muscular efforts of impending delivery. A close row of double-gutted silk-worm button-sutures, reinforced by separate sutures of each layer of the abdominal wall, was applied, and the usual adhesive strips and a snugly-fitting binder were added. Following the operation vomiting continued for another day, undoubtedly on account of the existing local peritonitis. But the pulse-rate began to fall immediately, especially after flatulence was relieved by a high enema. December 5th, at 3.20 a.m., labor began, and was brought to a successful termination under the guidance of Dr. Morrison, house-surgeon. Immediately after the expulsion of the placenta, I examined the sutures, and found them absolutely intact, no hematoma present, and everything in best order. An uneventful recovery was followed by the discharge of the cured patient December 17th; both mother and infant doing well.

Case II.—*Relapsing appendicitis during second month of first pregnancy; operative removal of appendix; recovery; normal delivery at end of term.*

Mrs. M. W., aged 21, had had altogether five attacks of appendicitis, the first and the last ones having been the most severe. Since the last attack patient had married and become pregnant, and sought advice regarding her chances toward the safe delivery of a child, both herself and her husband being very anxious to have progeny. The thin abdominal wall permitted of excellent palpation, and, though the appendix could not be distinctly felt, pressure at one point was exquisitely painful. Unhesitatingly the advice was given to have the appendix removed immediately, as its presence, with progressing pregnancy, put the lives of both mother

and fetus in great jeopardy. January 13th, 1896, a somewhat enlarged appendix attached to the congested omentum was easily removed. Its mucosa was ulcerated in several places, and it contained three fecal concretions Its base was stenosed. The abdominal suture was very carefully done. The patient was discharged, cured, on January 27th, and was delivered safely at full term by Dr. Marx, the scar behaving admirably under the strain.

CASE III.—*Acute appendicitis during the fifth month of pregnancy; removal of erect and congested appendix; recovery; safe delivery at end of term.*

Mrs. S. F., primipara. Typical, severe attack of appendicitis with vomiting, rising pulse and temperature, which were 126° and 102° F., respectively, the local pain being especially violent. Operation was had December 15th, 1896, when the congested, and in one place nearly perforated, appendix was easily removed, all the threatening symptoms subsiding directly after the operation. Uneventful and prompt recovery followed, and the patient was delivered at full term.—*Phila. Monthly Journal.*

HEMORRHOIDS AND THEIR TREATMENT.

THE anatomical division of hemorrhoids into external and internal is based not only on the fact that one is formed without, and the other within, the cavity of the rectum, but also on the relation they bear to the venous supply of the part. There are three sets of rectal veins, as there are three sets of arteries—the superior, the middle, and the inferior. These vessels constitute the hemorrhoidal plexus, and surround the lower third of the rectum subjacent to the mucous membrane. The superior hemorrhoidal vein is one of the rootlets of the portal vein; the middle hemorrhoidal vein empties into the internal iliac, and the inferior hemorrhoidal vein into the internal pudic, both tributaries to the general venous system. It is owing to this arrangement that the hemorrhoidal plexus is regarded as the link between the systemic and the portal system of veins; and this fact has also an important bearing upon the production of hemorrhoids. It should also be remembered, in this connection, that the hemorrhoidal plexus forms a free anastomosis with the prostatic and the vesical plexuses, hence disturbances in and about the bladder increase any hemorrhoidal tendency. Dr. Charles B. Kelsey further classifies the venous channels of the lower bowel into a rectal and an anal circulation; the former consisting of the superior hemorrhoidal vein, and the latter of the middle hemorrhoidal vein, which receives the blood from the anus, and the inferior hemorrhoidal vein, which carries the blood from the adjacent integument.

External hemorrhoids are divided into (1) the venous, (2) the cutaneous, and (3) the compound.

1. The venous variety occurs in three forms: (*a*) as a marked

varicose condition of the plexus of external hemorrhoidal veins; (*b*) as a thrombosis of this plexus, and (*c*) as a clot of extravasated blood, due to a rupture of a varicose vessel.

2. The cutaneous pile consists essentially of a hypertrophy of the skin surrounding the anus. It frequently is the result of a venous hemorrhoid, a fold of skin being left after the clot has been removed either by absorption or operation. When uninflamed, it occasions no great inconvenience; but when aggravated by improper diet, irregular habits, uncleanliness, etc., it invariably causes the patient, as stated by the Messrs. Allingham, an amount of suffering quite disproportionate to the pathological appearance. Dr. Joseph M. Matthews states that in his opinion the cutaneous pile is not an excrescence, as some authorities think, but an enlargement of the superfluous tags of skin sometimes found around the anus.

3. The compound, external pile, in which the hemorrhoid is largely external, but is also covered with mucous membrane, and is contained within the area of the internal sphincter muscle. This variety is so frequently observed as to justify its separation into a distinct class.

Dr. Charles B. Ball applies this name to a form of external pile, which is found to consist principally of connective tissue, and which contains several thrombosed veins of considerable size, instead of one central cavity, as in the common variety of venous hemorrhoid. The form of hemorrhoid described, and not the one designated by Dr. Ball, should be understood when the term "compound external hemorrhoid" is employed. Unless inflamed, external piles (with the exception of the thrombotic variety) give rise to no pain and but slight inconvenience. Any annoyance occasioned is largely due to the mental effect produced by the knowledge that something abnormal exists about the rectum. In the acute stage a thrombotic pile is always attended by severe pain (due probably to distension), and by considerable constitutional disturbance. All varieties of external hemorrhoids, when inflamed, are accompanied by pain, spasmodic contraction of the levator ani muscle and the sphincter muscles—a disagreeable sensation, as if there was a foreign body about the rectum, which induces more or less tenesmus, as well as a constant feeling that the bowels must be evacuated. Finally the general health is affected and the reflex symptoms are often present.

When excoriations or fissures coexist with piles, the pain is always more intense and the swelling more marked.

With proper treatment and rest all the aforenamed symptoms subside, the piles shrivel, but, though much smaller, do not entirely disappear. They may continue in this state for an indefinite time, occasioning no inconvenience; but under the influence of irritation they are liable to become swollen and painful. The so-called edematous pile is the result of such a condition—the cutaneous tag, as the result of some irritation, becoming acutely inflamed. Ex-

ternal hemorrhoids rarely suppurate, and when they do a marginal fistula usually results.

Hemorrhoids occur in all walks of life and with about equal frequency among the two sexes. Few people of middle age escape without in some degree suffering from them. Some occupations and modes of life undoubtedly act as predisposing causes in the production of this disease. Some authorities regard the affection as often of an hereditary nature, but the consensus of opinion at the present day is against that view.

Mr. Harrison Cripps, F.R.C.S., writing on this point, states: "Without for a moment believing that the actual piles are inherited, I think it not unlikely that such predisposing causes as a weak sphincter muscle, abnormal thinness or delicacy of the skin and mucous membrane, or even deficiency in thickness in the coats of the vessels, may be a transmitted tendency, increasing the liability to piles."

Hemorrhoids rarely occur before puberty. Those causes which determine blood to the rectum, or which impede its return from the pelvis, tend to produce this malady. Drastic purgatives; the accumulation of feces, occurring in constipation; disease of the liver interrupting portal circulation; abdominal tumors pressing on the inferior mesenteric vein; the impediments to the circulation caused in women by the gravid uterus, especially during labor; the strain induced in urination when urethra is obstructed, as in stricture, or by the presence of an enlarged prostate; violent exercise, as in playing hand-ball, may all be regarded as causes of hemorrhoids Among other causes of this disease may be mentioned diarrhea, sitting on damp or cold seats, friction from clothing, the employment of printed paper for detergent purposes, from which the ink readily comes off; and, finally, the neglect of observing necessary cleanliness of the part—some persons seeming to forget that the anus requires as much, if not more, washing as any other part of the body. From the description given, and after a careful examination has been made, the diagnosis of external piles should not be a difficult matter. It is uncertain the length of time it will take to afford relief from pain when palliative treatment is pursued. The radical cure of piles ensures almost immediate relief from pain, and a cure in the course of a week to ten days. The local condition is not the only point for consideration in the treatment for external hemorrhoids. Permanent relief or the most satisfactory results are obtained by the correction or removal of those causes, systemic or local, which are the predisposing, if not the exciting, factor in the production of the disease under consideration. A few of the more important conditions will now be considered.

(*a*) Regularity in the time of going to the closet is the first step to be taken in the correction of this condition. Patient should be directed to go at the same hour every day, whether the desire exists or not. Before or after the morning meal will usually prove

the best time. Physical exercise is another very important factor in correcting costiveness. To be of benefit it must be taken regularly. Certain articles of food often aid in the removal of this affection, such as the fruits, of which apples, oranges and prunes are the best. A dozen uncooked French prunes eaten before retiring, will be found a very agreeable laxative. Medically, the treatment of constipation covers a wide range of remedies. No one plan can be outlined that will benefit all, or even the majority of persons so afflicted. In some instances a tumberful of hot or cold water taken before breakfast will nicely regulate the bowels. Elderly persons often find it of advantage to take the water before each meal. Should this fail, the mineral waters may be tried, of which the Hunyadi Janos is by far the most satisfactory in every way. A wineglassful of this water, followed by a similar quantity of hot water, taken the first thing in the morning, is the dose which should be employed. It will be found to cause a free movement in one to three hours afterwards, and in cases of this kind will be found exceedingly beneficial. Fluid extract of cascara with equal parts of glycerin, in doses of 30 to 60 drops, at bedtime, will always prove useful.

(*b*) If dependent upon a gouty or lithic acid diathesis, the treatment must be directed towards the relieving of these conditions. In all cases the diet should be carefully regulated. Meat should be taken in small quantities. Rich gravies, sauces and pastry are to be avoided, as well as all sweets. The use of alcohol should be restricted. All wines, except claret, are particularly objectionable. Considerable benefit is to be derived from the use of aperient medicines, of which the salines are the best, as the sodium phosphate or the sulphate, or some of the natural mineral waters. In a number of cases marked improvement results from the use of mercury in some form, such as fractional doses of calomel, or blue mass in five to ten-grain doses. Ammonium chloride, in ten to fifteen-grain doses, four times daily, is a useful remedy in hepatic congestion. Strong nitrohydrochloric acid, in combination with the tincture of nux vomica and the compound tincture of gentian, in the proportions of one-half a fluid drachm of the acid to one-half a fluid ounce of the remaining drugs, often proves of value when administered in doses of twenty-five drops in a wineglassful of water three times a day after meals. Turkish baths are beneficial when taken once or twice a week. Massage is of decided advantage. Lithium salts are indicated, either in the form of the effervescing citrate, or the waters of some of the numerous mineral springs. In some cases the wine of colchicum is an efficient remedy, in doses of from five to twenty minims.

(*c*) These, when accompanied by destruction of the capillary vessels, are rather subordinate factors in the causation of piles, but nevertheless demand consideration and treatment when associated with the malady under discussion.

(*d*) Polypi, irritable ulcer of the rectum (more commonly called fissure), rectal stricture, phymosis, adherent prepuce, stone in the

bladder, enlarged prostate, urethral stricture, malpositions of the uterus, and growths or other diseases of that organ, as well as of its appendages, must receive attention before we can hope to deal satisfactorily with the hemorrhoids. Errors in diet and mode of living should likewise receive proper attention.

The local treatment of external piles will be considered later.

THE CRUSADE AGAINST TUBERCULOSIS.

THE Crusaders who went to Palestine several centuries ago to wrest from the possession of the Turk the Holy Sepulchre, represented the choicest chivalry of Europe, and they were animated by a most holy enthusiasm. A new crusade has recently been undertaken in England, the participants of which will not need to leave home, don armor, carry banners nor imperil their lives. But the movement in which they are engaged promises more glorious achievements than those of Godfrey of Bouillon and Richard the Lion-Hearted. And mankind is likely to derive more benefit from its success.

Moreover, the new crusade—that of the National Association for the Prevention of Consumption and other forms of Tuberculosis—has already enlisted the support of many of the most prominent and influential people of the United Kingdom. A meeting was held to advance this admirable cause a month ago at Marlborough House, under the presidency of the Prince of Wales, and was attended by Lord Salisbury, Lord Rosebery, Lord Derby, the Medical Director-General of the Army and Navy, the president of the British Medical Association, the heads of several medical colleges, and no end of other representative people.

The first step to be taken by the chivalry of modern Britain in this warfare is to enlighten the public as to the nature of the disease which it is proposed to fight, show the ease with which it may be communicated and emphasize the possibilities of eradicating it entirely from the land. The newspapers are being filled with simple statements of the appalling number of deaths that result from this one cause—60,000 in the British Isles alone every year. Then there are explanations of the fact that tuberculosis is due to a special germ, or bacillus, whose identity was established years ago by the German investigator, Robert Koch. It is pointed out that the bacillus of consumption cannot be taken by a well person from a sick one by breathing air expired by the invalid (as was commonly supposed), but finds its way out of the patient only as expectorated matter. This may dry and liberate the germs of the disease, which are then inhaled with other dust by unsuspecting persons.

The object of this elaborate plan for disseminating detailed information as to the mechanism of infection is to pave the way

for the restrictive measures which constitute the fundamental part of the crusade. If people can be induced to stop spitting in public, or to expectorate only into vessels that may and will be disinfected promptly, an end will be put to consumption. It is necessary to the success of the scheme that this prohibition shall be general. It is not enough to persuade the consumptives to stop spitting. It is a curious fact that a vast number of people who are not suffering from tuberculosis nevertheless carry around in their throats and lungs millions of the bacilli of consumption. No more serious mistake could possibly be made than to suppose that one succumbs immediately to these germs.

Thousands of men and women inhale and nurture consumptive germs in their lungs and throat without ever knowing it. Frequently no harm whatever results. Sometimes the disease makes a little headway and then stops, and the person eventually dies of something else. Consumption often cures itself, and in a great many cases is cured by careful treatment. So that there are countless persons going about to-day, with no suspicion that they have or are just as dangerous to the community as well-developed consumptives. Their sputum is liable to convey disease in the manner described. The principal aim of the new crusade is to persuade those who do not think themselves capable of transmitting disease to stop spitting in public.

The appeal thus made is to the philanthropic instincts of human nature. Although compulsion would be justifiable within certain limits, and although more or less legislation will undoubtedly be invited and secured, the general policy is to make the proposed reform a purely volunteer matter. Consumption may properly be classed with diphtheria, scarlet fever and smallpox as an infectious disease, and made the subject of strict quarantine regulation. But John Bull is warned by a recent vexatious experience.

A very unfortunate movement, based on ignorance and prejudice, has led to a modification of the old compulsory vaccination law, and invoked upon Great Britain the condemnation of scientific men of other lands. This concession is regarded as a backward step, a surrender to cranks, and something more than a merely foolish humoring of a cantankerous element of society. However, just now it is regarded good policy in England to avoid even the appearance of compulsion in the anti-spitting crusade. Until it is seen how much or how little can be accomplished by persuasion, it is deemed unnecessary to go further.

The second great preventive measure that is being urged by the association is the sterilization of milk. Tuberculosis is a disease that affects cattle as well as human beings, and infected cows transmit the germs to people that drink their milk. Now the destruction of diseased cattle is possible within certain limits, but a thorough prosecution of that programme is not considered practicable. But if the milk is sterilized by boiling, danger is obviated. Fortunately, sterilization is easily accomplished, and if agitation is

carried on judiciously and earnestly the milk supply of the cities, and especially the supply for infants, can be safeguarded.

Finally, it is proposed to aid the recovery of persons now or in the near future suffering from consumption. For this purpose the establishment of sanatoria is recommended. Something is already being done in this direction. The sum of $100,000 has recently been given for the erection of a sanatorium in London, and another is to be built in York. It is hoped that the discussion of the subject that is now going on in England will lead various millionaires to provide for further construction and treatment of this sort. These institutions are not to be run as free charities, but conducted somewhat like model lodging-houses, on a commercial basis. A good many persons who could not afford to go to Switzerland or the Mediterranean for a prolonged sojourn, but could pay a modest weekly stipend for their board, would be accommodated here.

Two of the newest ideas that have been accepted by the medical profession in regard to consumption are that it may be treated with more success in a high place than in a warm place, and that out-door air, in place of the atmosphere of a closed dwelling, is the best guarantee of recovery. The first of these theories led to despatching consumptives to the Alps instead of to the balmy South of France. The other scheme has been embodied in sanatoria, where people sit and walk out of doors a great deal. Emphasizing this point only two or three weeks ago, the London *Spectator* remarked:

"What is so valuable to the Swiss treatment is not the air of the Alps, but the air. People who in England would have been shut up in their rooms all the winter, have been encouraged to be a great deal out of doors, and to live as much as possible out of doors, and have gained fresh life and strength by the process. Air can be had in England as well as in Switzerland; indeed, it has been thought a fault in our climate that it gives us too much air. But for the consumptive patient this is just what is wanted. Quantity, not quality, is the secret of cure, and experiments carried out in districts so unlike as Edinburgh, Norfolk and Ireland have convinced the medical profession that treatment which at Davos or St. Moritz is of necessity costly, may be had at home at comparatively small outlay."—*Selected.*

RHUS POISONING.

I RECALL an incident of my childhood when I had been in the swamp and gotten a more than usually severe dose, which defied stump-water, sour buttermilk and lead-water—the usual home remedies—and the good family doctor was sent for.

He provided a lotion from his capacious saddle-bags, which soon relieved my sufferings, and on a subsequent visit I was very curious

to learn what he had used. I have not forgotten the way the kind old gentleman answered me: "My boy, it is evident that you want to be a doctor. We call this preparation yellow wash. It is poisonous; you must not drink it, and must keep it out of your eyes." This was the germ of what medical knowledge I have since gained.

I have frequently dropped my yellow wash for some new remedy for rhus poisoning which was recommended, but have as often returned to my first love. It is the Lotio Hydrargyri Flava of the B. P., which I use in full strength, continuously applied by means of a cloth wet with the lotion, as soon as irritation is recognized. In my own case it seldom prevents vesication, nor have I succeeded in finding anything which would. It is cooling and germicidal. (Notwithstanding the fact that the germ has not been found, I cannot help giving in this case the Scotch verdict of "not proven," and await developments.) It will certainly arrest the formation of a new crop of vesicles, and keep down much of the inflammation.

After the specific symptoms of rhus poisoning subside, there sometimes remains an inflammatory or excoriated condition, which is best allayed by some emollient application, like the carbolized ointment, or if something astringent as well seems indicated, the alum ointment of Sir Astley Cooper made up with eucalyptus, which has recently become so popular among us.

There are generally some constitutional symptoms, which are best met by treating them as they appear. Aconite or gelsemium for the febrile condition and quinine are often required.—Dr. J. H. Hunt, in *Brooklyn Medical Journal.*

ORTHOFORM (HOECHST).

BY PROFESSOR EINHORN AND DR. HEINZ.

A local anesthetic, in order to relieve the pain of wounds, ulcers, burns, excoriations and the like, must possess the following properties: It must be absolutely non-poisonous, and it must be slowly absorbed. Cocaine salts do not fulfil either of these conditions. Their toxicity limits their employment, and as they are readily soluble they are quickly absorbed, so that at the end of a quarter of an hour, or, at most, one hour, the anesthesia has disappeared.

After several years' research we have at length succeeded in finding a non-poisonous substance which produces complete and lasting local anesthesia. Like iodoform, it is very slightly soluble, and therefore remains on the surface and maintains a constant action.

Transplantations.—The first trial, and a very instructive one, made on a human patient with orthoform, was in a case of transplantation. The patient, affected with lupus, had already borne four transplantations, and on every occasion experienced extremely

severe pain, lasting several hours, in the part from whence the skin was removed, although covered with boric acid ointment. During narcosis, a patch of skin the size of the hand was taken from the left breast, and upon return of consciousness the patient was surprised to feel nothing, the surface having been anointed with a 10 per cent. orthoform ointment. The bandaged breast was absolutely free from pain and remained so. On changing the dressing two days later no irritation of any kind was observed in the vicinity of the wound, whilst secretion was remarkably small and growth of skin normal.

Ulcers.—Equally satisfactory to the medical attendant and comforting to the patient is the action of orthoform on painful ulcers. A patient with exulcerated carcinoma of the face, who had suffered severe pain for months, was able by an application of orthoform to pass a painless night in sleep. Within a week nearly two ounces orthoform was applied in powder form to the face of this patient. This had not been possible if orthoform were not non-poisonous. Being also antiseptic and desiccative, orthoform answers excellently for ulcers of the feet and legs. The results were most satisfactory in a number of painful ulcers of the feet, where the very severe pain was relieved for many hours or days.

Ulcerated Throat.—An excellent prospect for the employment of orthoform in ulcerated throat is afforded. A number of patients severely affected had been treated with cocaine with only temporary relief. In about an hour the unpleasant sensations returned; the act of swallowing was painful and difficult, and the patients lost in weight. On the other hand, a single insufflation of orthoform powder dispersed the pain for twenty-four hours. The patients could take nourishment easily and their general condition and weight soon improved.—Extract from Clinical Reports (*Munch. med. Wochenschrift*, 1897, No. 34).

SPREAD OF TUBERCULOSIS BY FLUID PARTICLES.

Fraenkel (*Berliner Klinische Wochenschrift*, January 9th, 1899) believes that the studies of Flügge in the spread of tuberculosis by fluid particles greatly weakens Cornet's doctrines. Flügge and his pupils have shown that during speaking and coughing minute particles are ejected from the mouth and upper air-passages which may, in the tuberculous, contain tubercle-bacilli. Schäffer demonstrated that leprous patients who had lesions in the mouth and pharynx, while speaking expelled, during a period of ten minutes, thousands (up to 185,000) of lepra-bacilli. Bussenius, an assistant of Fränkel, found tubercle-bacilli on the lenses of his spectacles after examining laryngoscopically patients who coughed during the examination. Flügge found tubercle-bacilli in the saliva of tuberculous patients, especially in the morning; these bacilli are readily conveyed to the

air during simple speech. The tiny drops that are expelled during speech, coughing, etc., can readily be rendered visible by being caught on a mirror held about 30 cm. from the face. Flügge's important researches render it apparent that disinfection of the sputum alone is not sufficient to prevent the spread of tuberculosis, and the author, in order to deal with the germ-bearing fluid particles, proposes that phthisical patients should wear a mask day and night, which should be removed only during eating or to expectorate. On the inside of 26 out of 52 masks worn by patients tubercle-bacilli were found. In order to induce patients to wear the masks, the gauze which covers them, was moistened with pine-needle oil or pepperment-oil, so that they might think the mask had also a therapeutic purpose. The oils do have, the author adds, a value in the latter direction. At the present time a compulsory wearing of the mask is out of question, but everywhere where tuberculous and healthy persons are constantly in the same room, the former should be induced to wear the mask. The only objection to the mask in Fränkel's eyes is that it renders its wearer conspicuous.—*Phil. Med. Jour.*

Gonorrhea, Septicemia, and Heart Disease.—Not very long ago it was thought that gonorrhea was a serious local disease in the male but relatively trifling in the female. Then it was found that women often suffered from grave local complications. General infection is fortunately rare in either sex, but it may occur. Drs. Thayer and Lazear have published an important monograph on Gonorrheal Septicemia and Ulcerative Endocarditis in the January number of the New York *Journal of Experimental Medicine.* It contains much original work and a well-prepared table of thirty-two cases. The authors conclude that an acute gonorrheal urethritis may be the starting point of a grave general septicemia, with all its possible complications. The infection may be mixed or secondary, due to the entrance into the circulation of organisms other than the gonococcus, or they may be purely gonococcal. Endocarditis, an occasional complication of gonorrhea, may be quite transient, or may result in a chronic valvular lesion, or may pursue a rapidly fatal course with the symptoms of acute ulcerative endocarditis. The complication is generally due to the direct action of the gonococcus, but may be traceable to a secondary or mixed infection. The same applies to gonorrheal pericarditis, a rarer complication than endocarditis. Grave miocardial changes, necroses, purulent infiltration, embolic abscesses are common in the severe gonococcal septicemias. In instances of this special form of blood poisoning the diagnosis may in some cases be made during life by cultures taken from the circulating blood according to proper methods. There is reason, when we remember the evidence already referred to about chronic valvular lesions, to suspect that cardiac disease may be more often a result of gonorrhea than is usually supposed.—*Brit. Med. Jour.*

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SOME INCIDENTS IN THE LIFE OF JOHN HUNTER, ANATOMIST AND SURGEON.*

BY A. PRIMROSE, M.B., C.M (EDIN.),

Professor of Anatomy, Associate Professor of Clinical Surgery in the University of Toronto.

GENTLEMEN,—The duty has devolved upon me of delivering the opening lecture of the Medical Faculty of the University of Toronto. This is the beginning of the thirteenth session since the re-establishment of the Medical Faculty in the University, and during the dozen years which have elapsed marked progress has been made in improving the facilities for medical education in our University. As I became a member of the teaching staff the year after reorganization I can speak from personal experience of a little more than a decade. Further, it has been my duty for the past five years to act as Secretary of the Faculty, and in that capacity I have had special opportunities for observation. Further development and improvement is greatly needed in various departments, but I think we may congratulate ourselves that the standard of teaching, and the facilities afforded for thorough training in our laboratories and hospitals, as well as in the lecture theatre, are worthy of the Provincial University.

The conceptions which I had of university life were first formed as a student in the University of Edinburgh, and when I became connected with the University of Toronto I was wholly at a loss to understand the conditions which then existed. The Medical Faculty had just been reorganized, and many bitter opponents

*Opening lecture of the Medical Faculty of the University of Toronto, 1899-1900.

existed against the new order of things. Some there were outside the University walls, connected with other schools of medicine, who, fearing competition with this Faculty, questioned the right of the Medical Faculty of the University of Toronto to utilize the advantages offered in the University for instruction in certain branches of the medical curriculum.

This gave rise to a great deal of friction, and the questions were discussed at length in the public press and elsewhere. This discussion was perhaps not to be wondered at: it is simply another example of the "struggle for existence" which is constantly going on in all walks of life. There was, however, a peculiar relationship existing within the University itself between the Medical Faculty and their colleagues in Arts. The idea was prevalent with certain people that the Faculty of Medicine had no reason for its existence. They looked upon the Medical Faculty as an interloper, and would have terminated its existence by violent means had it been in their power to do so. It was this aspect of the situation which surprised me—a condition the exact opposite of that existing in the University of Edinburgh, where the Medical Faculty constituted the chief part of the University, where, in fact, the University is famous mainly as a school of medicine.

We may congratulate ourselves, however, on the fact that the University has survived all these trying ordeals, and has steadily grown in strength and favor. The outside schools now let us severely alone, and apparently there has been demonstrated the fact that there is room for all, and that the better policy is to avoid petty squabbles and to concentrate all possible energy on improvement within one's own border. We find, too, that the Medical Faculty of the University of Toronto is on the best possible terms with their colleagues in Arts. The Medical Faculty is, indeed, looked upon as a source of strength to the University, and, far from crippling that institution, it has helped it materially both financially and otherwise. Possibly the conditions obtaining in Edinburgh may one day be observed in Toronto and the Medical Faculty may develop into the most important department of the University, whilst in the distant future there may be repeated in Toronto what has recently occurred in Edinburgh, where the Medical Faculty have found it their privilege to come to the assistance of their weaker brethren in Arts.

Whilst the Medical Faculty has made progress during the period mentioned, we have to record during that time losses sustained by death. In the department of Surgery two professors have died—Dr. W. T. Aikins, Professor of Surgery and first Dean of the Faculty in 1897, and Dr. Laughlin McFarlane, Professor of Clinical Surgery in 1896; whilst in the department of Medicine two vacancies have occurred by death—Dr. H. H. Wright, Emeritus Professor of Medicine in 1898, and to-day we have to mourn the loss of Dr. J. E. Graham. Dr. Graham was present with us during our last session, and was actively engaged in the work of teaching.

By his death the University of Toronto has suffered a great loss. The reputation in which he was held as a physician has been demonstrated by the high eulogiums which have been pronounced upon his career in the medical press of Canada, Britain, and the United States. To-day we mourn his loss as a teacher in this University. We owe much to him for his work in that capacity. He was among the first to introduce the method of systematic instruction at the bedside, and his wonderful gift of imparting instruction as a clinical teacher will long be remembered by those pupils who had the good fortune to attend his clinical lectures. The patient and consistent manner in which he performed his work was itself worthy of imitation by those whom he sought to instruct. He had a remarkable faculty for grasping all the details which presented themselves whilst investigating obscure disease, and the systematic manner in which he considered these, and interpreted their significance, was itself a demonstration of incalculable value from an educational standpoint. Dr. Graham was beloved alike by his colleagues and his pupils. His uniform kindness and courtesy formed elements in his character which we shall long cherish in memory and should strive to emulate. His integrity, industry, and steadfastness of purpose will ever be an inspiration to those who had the privilege of being associated with him in his work in this University.

Let me now address a few words more directly to the students who are assembled here to-day for the purpose of beginning another session. You have come to this University for the purpose of preparing yourself for your life's work; you have deliberately chosen this school as an efficient means of equipping yourself for that work by the training you receive whilst here. We as teachers feel the responsibility of our position, and we hope that the confidence placed in us may be fully justified. The function of the teacher, we are told, is "to teach and propagate the best that is known and taught in the world," and whilst the true teacher should command the respect of his pupils, yet, after all, there is an element in the relationship between the teacher and his pupil which we are apt to overlook by simply viewing the position from the standpoint I have indicated. There is, I believe, great danger of sapping the independence of our students by our manner of teaching. The best teacher is the man who teaches his pupils to think for themselves, and educates them to become independent factors in the search after truth, capable of investigating and observing, and thus becoming intelligent students, true investigators, and men able to apply the reasoning faculty when conditions of difficulty present themselves. There is real danger lest a student should drink in all that is presented to him during his course, and accept all statements without question, and often without understanding them, as if it were sufficient merely "to know" and not equally essential also to "understand." No doubt the course is so congested at present that there is a tendency for the teacher to crowd in as much matter as

can possibly be accomplished during the allotted time. The student subjected to this treatment has little time for the assimilation of the material thus provided, and we fear too frequently there is not the intelligent grasp of the subject there ought to be. Surely the student, especially the medical student who will be thrown sooner or later upon his own resources to treat disease, should be trained to have his faculties always on the alert. Nothing should be passed by without careful scrutiny, and every effort should be made to thoroughly understand each item of instruction presented to him. Professor Chiene used to tell us that he thought we, as students, had too much "spoon-feeding," and that he feared such methods of instruction would fail to develop that strength of character and intellect which ought to result were we compelled to think out and to solve for ourselves the knotty problems which present themselves in the study of the science of medicine.

Far be it from me to undervalue the importance of inculcating that respect for authority which is an essential element in the character of the true student, and yet there is a slavish respect for so-called authority which is exceedingly harmful. There are, unfortunately, men in our profession who are very credulous, and who are too ready to accept statements as true without sufficient proof of their accuracy. There are those who are apt to teach as true the statements made by an author simply because they are contained in the page of a book duly bound and labelled as a text-book on this or that subject. It is a very old doctrine, but we have much need of appreciating its importance to-day—

"Prove all things, hold fast that which is good."

Even in the subject of Anatomy, where one would think there was little room for speculation, as the anatomist is supposed to deal with stubborn facts and no fictions, one occasionally finds erroneous views promulgated. I remember our worthy Emeritus Professor of Anatomy—Professor Richardson—at one time deploring the many erroneous statements which creep into anatomical literature. He likened a certain section of anatomists to a flock of sheep. "Let one man make a statement," said Professor Richardson, "and all these anatomists follow like sheep over a stile, and repeat the error an infinite number of times." That, perhaps, is a somewhat extreme statement, but it is characteristic of a man of wonderful independence of character who, as an excellent anatomist and a keen observer, possessed the qualities which constitute a keen critic.

The danger of accepting too hurriedly the dictum of a man who would pose as an authority, is greatly increased to-day because of the large number of individuals who wish to be considered authorities. The confusion is added to by the absurd desire on the part of many workers to rush into print and publish the result of labors, often before they have themselves been able to interpret the true significance of what appears to them to be a discovery, or

perhaps to convince themselves that they have really made a discovery at all. This desire to appear before the public is, however, not a recent development, but was apparently looked upon as something to be condemned by right-thinking people a century ago. One finds on record a story of Dr. John Barclay, who was a worthy rival of that great anatomist of the early part of this century — Monro tertius of Edinburgh. Sir Robert Christison was one of Barclay's pupils, and records of him that he was a wit as well as a man of science. "Gentlemen," said Dr. Barclay, "while carrying on your work in the dissecting-room, beware of making anatomical discoveries; and, above all, beware of rushing them into print. Our precursors have left us little to discover. You may fall in with a trifling supernumerary muscle or tendon, a slight deviation or extra branchlet of an artery, or perhaps a slight stray twig of a nerve—that will be all. But, beware! Publish the fact, and ten chances to one you will have it shown that you have been forestalled long ago. Anatomy may be likened to the harvest field. First come the reapers, who, entering upon untrodden ground, cut down great store of corn from all sides of them. These are the early anatomists of modern Europe, such as Vesalius, Fallopius, Malpighi and Harvey. Then come the gleaners, who gather up ears enough to make a few loaves of bread. Such were the anatomists of the last century—Valsalva, Contunnius, Haller, Vicq d'azyr, Camper, Hunter, and the two Munros. Last of all come the geese, who will contrive to pick up a few grains scattered here and there among the stubble, and waddle home in the evening, poor things, cackling with joy because of their success. Gentlemen," said Dr. Barclay, "we are the geese."

The difficulties of the student in medicine appear to be increased year by year in consequence of the ever-widening field of knowledge. To-day must be solved problems in chemistry and physics which were not thought of a few years ago, and the study of biology and physiology becomes more difficult because of the recent additions made to our knowledge of these subjects. It has now become impossible for the student to do more than master what may in truth be called the most elementary principles of these various sciences. And what we have said of these sciences apply also to such subjects as anatomy and pathology. The teacher has a difficult task to undertake when he proceeds to select from the vast storehouse of knowledge that which will prove most useful for the student who comes to him for instruction. In great measure the desirable end is attained if he be taught his chemistry and physics, for example, in such manner and in sufficient detail to ensure that he is able in future to investigate intelligently the problems which present themselves having a chemical or physical bearing; or again, if he be taught to understand the problems which present themselves in his course in physiology or biology in such manner that he will be able to apply physiological or biological methods practically in the treatment of disease. This

intelligent method of dealing with the various subjects of the medical curriculum is surely more to be commended than that of cramming facts and theories in an indiscriminate fashion into the mind, and making the student a mere machine to reproduce, like a phonograph, the statements of his teachers for examination purposes.

Let me quote from Sir Michael Foster, who, referring to the inter-dependence of the various sciences taught in the medical curriculum, spoke recently as follows: "Clinical knowledge," said he, "rests on a basis of pathology, pathology rests on anatomy and physiology, or more widely on biology; biology rests on chemistry and physics, and these in turn on mathematics. Each of the sciences are stretching out day by day not only wider but deeper, and a knowledge of each one of them is only possible through a knowledge of that which is its basis." The doctor's life, says Professor Foster, "is in one aspect of it a prolonged investigation; n t a continuous inquiry into one homogeneous problem, but a repetition of attempts to solve the multitude of diverse problems presented to him day after day. His success, on this side of life at least, will depend on his power of right-thinking, and his power of clinical thinking is in part the outcome of his being trained to think in other things. He needs to be trained to think in physics and in chemistry in order that he may use these sciences aright when he attempts to study biological or physiological problems. He needs to be trained to think in physiology in order that he may think aright in pathology, and so, with his feet set in the right path, may in his future life be able, through the instincts, as it were, of a well-built mind, to recognize swiftly the value of the right views and the worthlessness of the wrong views, which from time to time will be offered to him, touching the nature and causes of disease. It is not the facts of physics, chemistry, etc., . . . but the right way of viewing these facts, the right way of thinking about them, which is the essential need." Thus we would have our medical students educated in the truest sense of the term, and thus we would hope to ensure that those who graduate from this University have cultivated that true scientific spirit which alone fits a man for the difficult task of dealing with disease in an intelligent and efficient manner.

The tendency for those of us who are students to imitate men whom we admire and respect, is very obvious, and it is therefore of the greatest importance that we should place our ideals high. If we are hero-worshippers, we should see to it that the object of our worship is worthy of our allegiance. The ideal is often found by the student in his teacher with whom he comes in contact day by day, and it is well that it should be so when that confidence is justly placed. It is possible, however, for us as students to take a broader view, and as we proceed with our studies we are compelled to judge of men and their work the world over; in fact, much inspiration of a stimulating character is not infrequently obtained

by studying not only the men of our own day but the masters who lived in other times. The University of Toronto has done well in endeavoring to stimulate interest in the history of medicine, and has recently instituted an examination in that subject for the M.D. degree. By this means students are encouraged to study the gradual development of the science of medicine, and by so doing it may be that, not infrequently, our ideal is found in a man who lived in the past centuries, and by the study of his life we may get an impetus which will serve to waken up latent talent in our own life and work.

Take, for example, the life of a man like John Hunter, characterized as "Man of Science and Surgeon," who lived 1728-1793. What an incentive to honest, conscientious work the study of such a life is! It is impossible, in the time at my disposal, to give but the briefest possible sketch of his life, but let me ask those students who hear me to study his character, and I can assure them that they will derive much benefit as well as pleasure therefrom. He was an indefatigable worker, and became famous not only as a surgeon but in other departments of science. Thus he has been described also as a great anatomist, a learned physiologist, and a profound pathologist. He was a Scotchman, who went to London early in his career, and he is one of the many Scotchmen who have become famous whilst residing in the great metropolis. His early developed scepticism, and his desire to sift the truth is apparent from a somewhat amusing anecdote narrated concerning him. One night, when he was about twelve years old, having gone to chat a little with some neighbors who lived in a cottage near his father's house, whilst he was sitting by the fire with two or three countrypeople, a most terrible apparition, with a face resembling the devil's, opened the door and looked in upon them. The company, which consisted of a woman and two men, believing it really to be what it represented, were petrified with fear and remained immovable, but John Hunter, who was, as he afterwards confessed, by no means certain that it was not the devil, snatched the tongs from the hearth, and, attacking the spectre, made it roar with pain and run out of the house.

When we consider the amount of work done, it is hardly credible that one man should have accomplished it in his lifetime, but here we have the key-note of his success in life. When we have talent combined with untiring industry, we have the stuff that makes the hero. It is well for those students who complain of long hours of work that they were not students under John Hunter. An incident is related of a student, a certain Mr. Thomas, who came to London and called on Mr. Hunter. "Well, young gentleman," said Hunter, "so you are come to London to be a surgeon. And how long do you intend to stay?" "One year," was the reply. "Then," said he, "I'll tell you what, that won't do. I've been here a great many years, and have worked hard too, and yet I don't know the principles of the art." After some further

conversation, Mr. Thomas was directed to call again in an hour, which he did, and accompanied Mr. Hunter to the hospital, when he said to him after business was over, "Come to me to-morrow morning, young gentleman, and I will put you further in the way of things; come early in the morning, as soon after four as you can." It was summer. Mr. Thomas kept the appointment, and found Hunter at that early hour busily engaged in dissecting beetles. Of his laborious life, Holmes writes that "his day began with sunrise in summer, and long before dawn at other seasons, after about four hours in bed; and then from four to five in the morning he used to dissect until eight o'clock breakfast. Then he saw his patients or pursued his researches till he had to go his rounds to the hospital or his office as Surgeon-General or his patients in the city, and after his frugal dinner at four o'clock and an hour's sleep, he resumed his labors till midnight brought his day to an end."

Hunter was first an anatomist; he was a keen and shrewd observer, and made many anatomical discoveries. His researches were far from being confined to human anatomy; he made also extensive additions to our knowledge of comparative anatomy. One of his biographers, Sir Richard Owen, says of him, that "from the title of his manuscripts it appears that Hunter possessed at the period of his decease, original records of the dissection of three hundred and fifteen different species of animals." In addition to these, Hunter's preparations testify that he had dissected a large number of animals, of which he left no written description. By adding these undescribed dissections to those of which we derive the evidence from the list of manuscripts, "there is proof that Hunter anatomised 500 different species of animals, exclusive of repeated dissections of different individuals of the same species, besides the dissection of plants to a considerable amount." Hunter believed in cultivating the faculty of observation in his students, and taught them to rely on their own powers of observation rather than accept the teachings of the authorities of the day. A certain Mr. Physick came to him as a student, and upon inquiry having been made as to what books he would require, Hunter led the way into the dissecting-room, and pointing to the several bodies said: "These are the books you will learn under my direction, the others are fit for very little." Some such sentiment ought to be expressed by the teacher of anatomy to-day, if it be used to enforce the importance of learning one's anatomy from the subject, and not from books. The enthusiasm with which Hunter pursued his researches was very remarkable; he was untiring in the energy he displayed in accomplishing his purpose, whatever that might be. A characteristic story is told of him that on one occasion, his money being exhausted, he went to his friend, Nicol, the bookseller, and thus introduced himself: "Pray, George, have you got any money in your pocket?" Nicol replied in the affirmative. "Have you got five guineas? because if you have, and will lend it to me, you shall

go halves." "Halves in what?" inquired his friend. "Why, halves in a magnificent tiger which is now dying in Castle Street." Nicol lent the money, and John Hunter got the tiger. The deliberate manner in which he planned to get possession of the skeleton of an individual, who was known as the "Irish Giant," also illustrates his determination to obtain whatever he thought of value to him in the pursuit of science.

The giant—O'Brian by name—learned during his life-time that Hunter's eye was upon him, and he therefore took precautionary measures, and ordered that on his death his body should be carefully guarded by relays of men until a leaden casket could be procured, in which the body was to be placed, and then carried out to sea and sunk. Hunter, however, was not to be baffled. On the giant's death Hunter's agent bought the watchers off. At first they agreed to a dereliction of duty for fifty pounds, but getting that so easily they demanded fifty more, and only ceased to extort when Hunter refused to budge a penny beyond 400 pounds! The skeleton of this giant may be seen in the Hunterian Museum.

Hard work was the all-absorbing passion of his life, and he never allowed anything to interfere with his work; he considered also that the greatest happiness could be obtained by patient, untiring industry. His advice to Jenner, in writing a letter of condolence to him because of a disappointment in love, indicates his belief in the efficacy of hard work in restoring happiness under such circumstances. "But," said Hunter, "let her go, never mind her; I shall employ you with hedgehogs, for I do not know how far I may trust mine."

John Hunter was a physiologist as well as an anatomist. He had a very extensive establishment at Earls' Court, where he kept a large number of animals which he used largely for experimental purposes, and for the purpose of studying their habits. He studied the development of the embryo from the egg, and made many important observations during his investigations.

Hunter's great aim in life was to study and to teach physiology as an experimental science, and as the only true basis of medicine and surgery. Let me mention one of his experiments to illustrate the completeness of his methods and show the manner in which he devised experiments and followed up his investigations. One of his biographers—Mather—writes as follows: "He was known to be humane and intent on conferring benefits on the human species as well as on science, therefore he was granted the privilege of making experiment on the deer in Richmond Park, and the result has proved the wisdom of allowing such liberty, for infinite blessing has been conferred upon humanity by the experiments. Hunter, in July of 1785, had a buck there caught and thrown, and tied one of its external carotids, which supplies the growing antler, and the soft covering called the velvet, in which the vessels convey the material of growth. He observed that the pulsations in the vessels of the velvet ceased, and that the antler which received its

blood supply therefrom, then half grown, became cold to the touch. Hunter debated with himself whether it would be shed in due time, or be retained longer than usual. To his surprise, on re-examining the antler a week or two later, when the wound was healed, it had regained its warmth, and was still increasing in size. Had, then, his operation in some way been defective? To determine this question the buck was killed and sent to Leicester Fields. On examination Hunter found that the external carotid had been duly tied, that the tied artery had been obliterated, but the circulation was carried on by vessels above and below the ligature, generally very small, but which, under the new conditions, had become enlarged, and by their anastomoses had supplied the blood supply to the growing part. Thus it was evident that under the 'stimulus of necessity,' to use a phrase of the experimenter, the small arterial channels are capable of rapid increase in dimensions to perform the offices of the larger ones." Thus was established in the middle of last century the important facts regarding the anastomotic circulation.

Hunter also investigated the conditions which presented themselves in disease, and he could lay claim to being an advanced pathologist. He investigated the phenomena which present themselves in inflammation, and wrote an extensive treatise on the subject He also worked upon the subject of mortification and the healing of wounds and a large number of other processes dealing with disease.

Hunter was forty years of age when he was appointed Surgeon to St. George's Hospital, and it was not until then that his work as a surgeon may be said to have commenced in earnest. Up to this period he had devoted the greater part of his time to the study of anatomy and to experiment upon animals. Now he began his work as a surgeon equipped in a manner like none other of his predecessors. Hunter raised surgery to the dignity of a true science. He had by his own efforts demonstrated the facts of anatomy, he had elucidated many difficult problems which present themselves both in health and disease, and in bringing this knowledge to bear upon his treatment of disease, he completely revolutionized surgical practice. His brother, Dr. Wm. Hunter, who was hardly less illustrious than himself, once said, "Were I to place a man of proper talents in the most direct road for becoming truly great in his profession, I would choose a good practical anatomist and put him into a large hospital, to attend the sick and dissect the dead." When forty-five years of age he gave his first lectures on Surgery. These lectures cost Hunter much labor. "Giving lectures was always particularly unpleasant to him; so that the desire of submitting his opinion to the world and learning their general estimation was scarcely sufficient to overcome his natural dislike to speaking in public. He never gave his first lecture of his course without taking thirty drops of laudanum to take off the effects of his uneasiness. He was so diffident of himself that he trusted nothing to memory, and

made his assistant draw up a short abstract of each lecture, which he read on the following evening as a recapitulation to connect the subject in the minds of the students."—(Home.)

The work he did in surgery was far ahead of his time. His operation for aneurism will become familiar to the student of surgery to-day. "In the treatment of wounds," said Hunter, "in order to facilitate the natural process of healing, little is to be done except removing impediments to the natural cure." In cancer, "unless the whole of the diseased part can be removed the operation will avail but little. . . . The first and great requisite for the restoration of the injured part is rest. . . . Varicose veins should be dissected out where this can be conveniently done.' How close he was to the truth of Lister's teaching of the present day may be judged from the statement that "air will be injurious to man and animals by its containing specific particles of contagion." He wrote a work on military surgery, and in this practically laid the foundation of military surgery.

Whilst Hunter developed into a surgeon, "he never dropped one burden because he shouldered another; in spite of the lectures, the increase of his private practice, and his work at the hospital, "he was engaged in numerous dissections, observations and experiments. In the years 1772-1776 he contributed seven papers to the philosophical transactions of the Royal Society, five of them on Comparative Anatomy or Physiology, one in Pathology and only one of the seven concerned with treatment" (Paget). We find a description of him, too, in his old age spending hours over a piece of dissection.

Hunter was progressive. In his work he never stood still. To Astley Cooper, who asked with surprise whether he had not the year before stated an opinion on some point directly at variance with one he had just put forth, he replied, "Very likely I did; I hope I grow wiser every year;" and to the same purport he answered another of his pupils who asked him if he had not written so and so, "Never ask me what I have said, or what I have written; but if you will ask me what my present opinions are, I will tell you." Occasionally he would say to any of the pupils whom he saw taking notes, "You had better not write down that observation, for very likely I shall think differently next year." One cannot help wondering what sort of politician Hunter would have made! As a matter of fact Hunter had some strong opinions on politics. He is described by Gross as possessing strong feelings towards the Tory side, and he used to say that he "wished all rascals who were dissatisfied with their country would be good enough to leave it." In giving permission to a friend to send a third party to see his museum, he tells him that he may send any one he pleases except a democrat, for "I would rather," he adds, "see it in a blaze like the Bastile, than show it to a democrat, let his country be what is may."

The Government of his time showed little interest in the pur-

suit of science. After Hunter's death when an effort was made, to get the Government to purchase his museum, Mr. Pitt said, "What! buy preparations! Why I have not money enough to purchase gunpowder."

Hunter was an untiring investigator, and his faculty for observation was of rare quality. "If we try to find," says Sir James Paget, "in Hunter's character, the facts to which may be ascribed his great influence in the promotion of medicine and surgery, I think it may justly be assigned to the degree in which he introduced the exercise of the observant scientific mind into the study and practice of surgery." He was an extraordinary collector, and built up an extensive museum. The bulk of the preparations and dissections were made by his own hands. Upon this collection he spent some £70,000, in fact all his available funds went in this direction, so that at his death he left barely enough to pay his debts. The museum, which was a very extensive one, was purchased some six years after his death by the British Government, who paid £15,000 for it, and handed it over to the Royal College of Surgeons as custodians. The Hunterian Museum is well known to members of our profession the world over. It has been still further added to since Hunter's death by those who have been the curators through successive years, among the most noted of whom may be mentioned Sir R. Owen and Sir William Flower. The Hunterian Museum has no rival; there is nothing like it elsewhere to be found.

Hunter had written records made of most of his work, and some ten large volumes of manuscript which had been written, revised and corrected—the work of many years—were purchased with the museum by the nation, but some thirty years after Hunter's death the manuscript was burned by Sir Everard Home, the executor of the estate. There never was any satisfactory explanation of why these were destroyed, but Home alleged that it was by Hunter's desire, because he considered the writings too imperfect for the public eye.

Such then is a brief sketch of Hunter's life. His name has been honored by British surgeons. The first Hunterian oration was delivered in 1814, and since that time, at first annually, and latterly bi-annually, the Hunterian oration has been delivered by the President of the Royal College of Surgeons. It is wonderful how much there is of true value to be obtained by the study of such a life. The different Hunterian orators have succeeded in characterizing this remarkable man as an advanced thinker in various departments of science. He has been described as botanist, comparative anatomist, biologist, geologist, naturalist, physiologist, pathologist and surgeon. His work, however, all converged from these various outlying sciences towards the great central aim which he had in view, namely, to apply his knowledge in the practical work of his profession for the purpose of healing disease and thus benefiting humanity. It has been said of him that with

the exception of Hippocrates, the father of medicine, John Hunter is the grandest figure in his profession. Certain it is that he was a man of indomitable industry and of powerful intellect, who possessed an absolutely original method in his work, and as for Hunter's relation to the authorities of the day we may say that he acknowledged no authority, he was absolutely unfettered by authority, and thus his genius had free play. Whilst this was his attitude, he shrank from posing as an authority himself. He expressed himself as having a great distrust for rapid thinking and of work published in a hurry. "It is surprising to see," he says, "how a young man, if he catches an idea which has any novelty, will write away on it and tell you wonders." In fact, he published nothing himself except a few short notes until he was forty-three years of age.

Whilst Hunter led this laborious life, and thus accomplished so much, it is remarkable to note that he was greatly handicapped in his work by severe illness, from which he suffered for some years, and that he also suffered the misfortune of a defective early education. In fact, up to the age of seventeen he had no education. As far as school was concerned, he could neither read nor write. He was not idle, however, as he was studying nature at that early age. To quote his own words, he says: "When I was a boy I wanted to know about the clouds and the grasses, and why the leaves changed color in the autumn; I watched the ants, bees, birds, tadpoles, and cadis worms; I pestered people with questions about what nobody knew or cared anything about." I fear if Hunter had been blocked by the matriculation examination of the University of Toronto, his career as a scientist would have been prematurely cut off! A little later in life, when he was taunted with his ignorance of the classics, he remarked upon the circumstance thus: "Jesse Foot accuses me of not knowing the dead languages; but I could teach him that on the dead body which he never knew in any language, dead or living." Jesse Foot was a rival surgeon.

Let me conclude this account of Hunter by quoting what that beautiful writer, Sir James Paget, says regarding him. "The influence of such men," says Dr. Paget, "reaches far beyond the time and space of their conscious activity; their true thoughts live after them; their true thoughts not only endure and remain—in the continuity of mental life they really live; they pass on from one generation to another, and in the minds of each succeeding generation they are developed, they grow, they attain more nearly to perfection. Thus when we honor the memory of Hunter we honor not only that which is past, but that which is still present—a still abiding power of doing good. For Hunter's true thoughts still live in us, and they will live after us, and never cease to help and urge men onward in the pursuit of truth. In the world of mind he that is mortal may produce that which is immortal."

I have thus attempted to direct your attention to the study of the character of a great man who lived in last century. There are

two men of our own time who, like Hunter, claim our respect and reverence. Last year in London the leading men of our profession from all parts of the kingdom gathered together to do honor to a distinguished foreigner. I refer to Professor Virchow, of Berlin, who came to London last autumn for the purpose of delivering the Huxley lecture. By his work he may be said to have founded the modern science of pathology. He completely revolutionized our knowledge of disease by demonstrating the part played by the cell in the various morbid processes. He, like Hunter, abandoned the teachings of his time, and by original investigation, in his work in cellular pathology, laid the foundation of the science of pathology as it is understood to-day. His brilliant career has extended over half a century, and I suppose no man has done as much to advance the science of pathology as he. The marvellous insight of the man, his originality of method and keenness of observation claim our greatest admiration. Virchow himself in referring to Huxley, described him thus: "A young man who, besides collecting a rich treasure of positive knowledge, has practised dissection and the exercise of a critical judgment. . . . Freed from the formalism of schools, thrown upon the use of his own intellect, compelled to test each simple object as regards properties and history, he soon forgets the dogmas of prevailing system and becomes first a sceptic and then an investigator." Surely in Virchow's estimate of the qualities of that eminent biologist of our own country he fixed upon the very characteristics which were so strongly developed in his own—qualities which have made Virchow one of the outstanding figures of his day.

We have also in our own day one of the most distinguished surgeons who ever lived. I refer to Lord Lister. As Hunter was the ideal anatomist and Virchow the ideal pathologist, surely Lister is the ideal surgeon. He addressed an assembly in this very lecture theatre two years ago. His work is known and recognized by scientists the world over. It is unnecessary for me to say anything of his work here to-day. You as students will become familiar with the methods of Lister as you proceed with your studies in surgery. Let me quote again from Virchow who, as a German, thus spoke of Lord Lister recently. Speaking of his antiseptic methods he says that "by devising this treatment Lister has introduced the greatest and most beneficial reform that the practical branches of medical science have ever known. Every one is aware," says Virchow, "that Lord Lister, on the strength of his original reasoning, arrived at practical results which the new theory of fermentative and septic processes fully confirmed. Before any one had succeeded in demonstrating by exact methods the microbes which are active in various diseases, or in establishing the special functions that they perform, Lister had learnt a truly prophetic revelation, the means by which protection against the action of putrefactive organisms can be obtained. The opening up of further regions of clinical medicine to the knife of the surgeon

and a perfect revolution in the basis of therapeutics have been the consequence. Lord Lister is already and always will be amongst the greatest benefactors of the human race."

Let us do more than admire the qualities which enabled such men to accomplish so much. Let us imitate them in their untiring efforts to establish the truth. May the life and work of such men animate our own and stimulate us to higher aims.

ON THE SIGNIFICANCE OF BOVINE TUBERCULOSIS AND ITS ERADICATION AND PREVENTION IN CANADA.*

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In determining the significance of bovine tuberculosis so as to arrive at adequate conclusions—adequate, that is, from all points of view—three main questions have to be asked and answered. These are:

1. Is tuberculosis in cattle a source of danger to other cattle so as to seriously affect their well-being, and to be a source of loss to their owners?

2. If infectious from animal to animal, is it infectious from animal to man, and thereby a grave source of danger to the human race?

3. If infectious from animal to man, what are the commonest modes of infection, and, as a sequel to this, how are we to diminish the danger?

If even the first of these only can be answered in the affirmative, then it becomes necessary to inquire how the disease can be arrested, and it is for our profession, as interesting itself in disease in general, to take a leading part in agitating for this arrest. If both the first and second, then are we not only indirectly but directly affected, and to allow tuberculosis in cattle to gain a headway without ourselves employing all the means in our power to arrest its progress, is little less than criminal.

To-day I propose briefly to consider in order, first, the significance of the disease, next its frequency in our country, and finally the steps necessary to stamp it out.

1. *Is tuberculosis in cattle a source of danger to other cattle?* To this the answer is an unqualified affirmative. We have abundant evidence here in Canada that the introduction of an infected bull, as again of infected cows, into a herd previously free from the disease, has been followed within a short time by symptoms of the disease in members of the old herd.

*Being a paper read at the meeting of the Canadian Medical Association, Toronto, August 28th 1899.

The ravages which this disease creates among the cattle of civilized communities is something appalling. Here in Canada, as I shall proceed to point out, we are in a relatively very favorable condition, and most of us in our profession see very little of the disease and of its results. It is otherwise in the Old World; there the steady spread of this plague among the dairy herds is creating widespread alarm. That it is extending there is no doubt. The following table of slaughter-house statistics, which I take from an article by Professor Conn, gives some idea of the rate of this spread:

BAVARIA.

1877	1.62 per cent.
1888	2.7 "
1895	5 "

SAXONY.

1888	4.90 "
1890	15.7 "
1895	27.48 "

BERLIN.

1883	2.86 "
1885	2.10 "
1895	15.45 "

LEIPZIG.

1888	11.1 "
1889	14.9 "
1890	22 3 "
1891	26.7 "
1895	33.3 "

It may be objected that this increase is only apparent, that the veterinarians and the officials at the slaughter-houses have of late years learnt to recognize the disease with increasing accuracy, a single tuberculous gland being now often detected, whereas it was passed over in earlier years. It may also be objected that other factors have to be taken into account, namely, the experience of the inspectors, the attitude of the inspectors towards the disease—a desire to find little resulting in little being found, and *vice versa*; that, further, the age of the animals slaughtered affects the results (tuberculosis being a disease showing itself especially in older cattle).* But all through the period indicated by the above table great attention has been paid to the subject by veterinarians; their eyes have been opened to the existence of the disease, and to methods of gross anatomical diagnosis in the carcase. At Leipzig more especially, as Conn points out, the inspection has been most

* According to Roekl (I quote from a report of Dr. Bryce to the Provincial Board of Health, Toronto), from a consideration of some 51,000 animals slaughtered in German abbatoirs in 1888-89, according to the age of the animal the infection was found:

6 weeks old	0.6 per cent.
6 weeks to 1 year	0.6 "
1 to 3 years	11.4 "
3 to 6 years	33.1 "
Over 6 years	43.4 "

careful. It has been under the same management during the whole period, so that the results of successive years may more safely be compared with each other than in most cases, and Leipzig affords the strongest evidence of the increasing frequency of the disease.

This rise in percentage of tuberculous cattle seen in the slaughter-houses at Leipzig from 11.1 per cent. to 33.3 per cent. in seven years is veritably appalling, and no other explanation can be afforded than that the disease, in Germany at least, is spreading with terrible rapidity. So much indeed is this the case that competent authorities there are of opinion that in a few years there will be no breeding herds left unaffected. If, in place of the slaughter-house statistics, we take those afforded by the tuberculin test, the percentage of cases found in animals other than yearlings is yet higher than those afforded by the slaughter-houses. In Germany and Denmark veterinarians have come to the conclusion that the amount of tuberculosis is over 50 per cent. of all the animals in the land, many large farms being found without a single sound animal. In other words, about half the animals in northern and western Europe would seem to be afflicted with tuberculosis.

Corresponding statistics for Britain do not exist, nevertheless the conditions there, it would seem, are scarcely if at all more favorable. Thus in the County of Midlothian, abbatoir statistics show the existence of the disease in 22 per cent. of the animals slaughtered, in Yorkshire a percentage of 22.8, Durham 18.7, and in London 25 per cent. These, be it remembered, are slaughter-house results and not those derived from the tuberculin test. In fact, tuberculosis among the most valuable and most highly bred herds is so extensive that extreme precautions should be taken and stringent contracts made by the buyer as well as stringent regulations framed and carried out by the Government to insure that, however great the cost of the individual cow or bull imported, the animal be found perfectly sound and unaffected by the disease before it is permitted to enter the country.

Personally, though in this I speak in no official capacity, I am inclined to think that, taking into consideration the fact that if once an animal has been inoculated with tuberculin it may not give a second reaction until more than a month has elapsed, I would urge that all cattle imported for breeding purposes be kept in quarantine for six weeks at least, and only permitted to be delivered to owners in this country if at the end of that period they fail to react. Otherwise, by any other course, there is a distinct danger that the disease may be introduced into herds previously quite free from the disease.

Nor even in the Eastern and older populated States of America is the condition much more satisfactory. Certainly, in Massachusetts, where the most painstaking observations have been made, the disease has been found very common. In their report for 1895, the Cattle Commissioners of that State show that in several large herds the percentage of animals reacting to tuberculin was as high as

100 per cent. These are, it is true, extreme cases. Of 3,295 animals examined by inspectors and others in various parts of the State, 810, or about 24.58 per cent. reacted. Of neat cattle examined at the Stock Yards, about 6.21 per cent. were condemned, while in the district of Nantucket, selected because of its position as an island on the coast upon which there were comparatively few cattle, and these fairly well isolated, 6 of the 665 animals upon the island, or rather under 1 per cent. reacted to the test. This, while it shows considerable variation in the prevalence of the disease under varying conditions, shows also that it is far from infrequent, and that care must be taken with regard to importation of stock for breeding purposes, from the Eastern States as well as from across the sea.

What are the results of and what the dangers from this extraordinary prevalence of the disease elsewhere ?

First and foremost, there is the effect upon the animal itself, upon its value as a milker, a breeder, and a meat-giver. While for some months a cow reacting to the tuberculin test may remain sleek and give abundant milk, sooner or later the disease progresses, she emaciates, dries up, becomes useless, and when killed is almost useless. What was once a valuable animal is finally a great loss to the farmer. I have met with cases of apparent healed or obsolescent tuberculosis in cattle, and it may be that such cases are not uncommon—in cattle, just as in man; but undoubtedly the danger is that the disease will extend.

In the second place, though this matter I shall not discuss at the present moment, there is the danger to the community in employing the milk and meat from such an animal. In any case where this disease is at all frequent, the loss to the farming community, and so to the country at large, is enormous.

Even in Scotland, which cannot be called a large country, or one in which cattle-raising and cattle-breeding is the staple occupation of the inhabitants, Professor Wright, in 1893, estimated that tuberculosis in cattle caused an annual loss of dairy stock of about £440,000, or $2,000,000, and this apart, I take it, from considerations of loss in milk and butter, and loss as breeding animals.

We may therefore conclude that, purely from the standpoint of the agriculturist, it is all-important that this disease be if possible eradicated.

II. *If infectious from animal to animal, is bovine tuberculosis infectious from animal to man?* The answer to this question is generally given as an unhesitating affirmative. I wish, however, to point out to you to-day that while we must accept the affirmative as the correct answer, and while it is the duty of the individual and of the State to act in full accordance with the belief that this is so, the amount of reliable evidence of direct transmission of tuberculosis from cattle to man is singularly slight. For let us consider the means at our disposal for determining this point. Could

we make a direct experiment the determination would be easy and straightforward; but this is just what we cannot do. To inoculate the human being with tuberculous material, or expose him to infection from a diseased cow, would be a criminal act; it would differ in no sense from attempted murder. We can, it is true, perform the opposite experiment, that of inoculating cattle with phthisical sputa or other tuberculous material from man. If we do this, as Theobald Smith has pointed out, we discover the remarkable fact that cattle are relatively insusceptible, or are but slightly susceptible to human tuberculosis. Whereas tubercle bacilli obtained from cattle introduced into other cattle induce a relatively virulent disease, those obtained from man either set up mild chronic disturbance tending to be localized or lead but to transient results, what tubercles are formed undergoing absorption and disappearance. Our own observations in Montreal fully confirm Theobald Smith's statement. That, because for cattle bovine tubercle bacilli are very virulent, therefore they are also very virulent for man, more than are the human bacilli, we know from comparative bacteriology to be an absolutely unsound deduction. This may be so, but it may not. We have fairly abundant evidence that passage of pathogenetic germs through a series of animals of one species, leads to those germs attaining their maximum virulence for that species—but not by any means necessarily for other species. Indeed at times the virulence for other species is distinctly lessened by such passage, and in connection with tuberculosis we have distinct evidence that the bacilli obtained from fowls suffering from tuberculosis differ even more widely in properties from those obtained from man than do the bovine tubercle bacilli. Despite some earlier observations to the contrary, it is now generally found that fowls may, with impunity, be fed with human phthisical sputa without becoming infected. Kruse has, it is true, obtained in a few cases tubercle bacilli of the avian type from the human body, indicating that man may be infected from birds. But we cannot legitimately and by analogy apply these observations to the case of bovine tuberculosis and man. We are forced, therefore, to fall back upon evidence of another type.

Do the bacilli gained from the human and bovine species possess a morphological and cultural identity? They do not. The bovine grow more freely in the ordinary glycerinated media; they are, I find, of greater relative breadth, while again, as already indicated, pathogenetically they exhibit different degrees of virulence, and this when inoculated not only into cattle, but into guinea-pigs and the small animals of the laboratory. Koch, it is true, in his classical experiments held them to be identical, but later research has shown them to be so distinct as to make some observers consider them distinct species. But to classify them as distinct is to pass beyond what is right and reasonable. We are accumulating more and more facts to show that pathogenetic bacteria may undergo extensive modification according to the nature of their environment, and that within certain limits bacteria may show more or

less permanent variation of common properties as a result of variation in environment. And in this matter of tuberculosis we have the most important observations by Nocard and Roux that avian tubercle bacilli, which differ more widely from the human than do bovine, can be shown not to be a distinct species, but what may be termed *a race:*—

While under ordinary conditions, human tubercle bacilli inoculated into birds are destroyed, and lead to no organic changes, if a pure culture of such bacilli be placed in celloidin capsules, and those be then hermetically sealed and introduced into the abdominal cavities of birds, when thus protected from the body cells but fed by the body humors which diffuse through the celloidin, they will grow, and in the course of weeks assume all the characters and all the pathogenetic properties of the avian bacilli. We can only from this conclude that the races of the tubercle bacilli spring from a common stock, and have undergone material modifications according to their surroundings. So far, however, bacilli having all the morphological and cultural characteristics of the bovine "race," havenot been isolated from the human organism, nor do I know that, so far, by placing protected human bacilli in the abdominal cavity of the cow, these have assumed the bovine characters. It is in this last experiment, I believe, that the solution of the question is to be found. For if we can show that under favorable conditions the human bacillus can become highly pathogenetic for cattle, the converse would also seem to hold that there are conditions under which bovine tubercle bacilli can be pathogenetic for man.

Failing direct experimental and bacteriological evidence of the absolute identity of bovine and human tuberculosis, we are for an answer to this question driven back yet further, and this time to casuistic evidence. Have we any evidence or absolute proof that by natural means tuberculosis has been conveyed from cattle to man? We generally teach that we have such positive proof, and at first thought it would seem easy to collect case after case in which, for example, butchers, and those dealing with tuberculous animals, have become infected through wounds, and so on; or again, of children and other human beings fed upon the infected milk of tuberculous cattle developing tuberculosis. But when we come to examine into these cases, we must be struck by the lack of indisputable evidence afforded. To prove the case we must be able to absolutely exclude every other possible mode of infection, and with human tuberculosis so common a disease, such exclusion is a matter of extreme difficulty. It must be shown that the individual has not come into contact with any other human being actively suffering from the disease. In the case of butchers it has to be proven that they have dealt with tuberculous cattle, and no other infected animals: previous cases of human tuberculosis in the neighborhood have also to be excluded, for we know that in dwelling-houses the virus may linger for long in the dust and in hangings of rooms. Thus, to obtain an uncomplicated case is a matter of the greatest difficulty.

Upon broad principles, it is true, the frequency of tuberculosis among children and its increasing frequency during the period when they have a diet largely of cow's milk, would appear to be a strong argument in favor of believing that the milk of cows affords the most likely source of infection. Only in this last week's *British Medical Journal*, in an able paper by G. F. Still of the Great Ormond Street Hospital for Children, the matter is brought forward very clearly. He considers a series of 769 consecutive necropsies on children under twelve years of age; in these no less than 269, or more than one-third of the total number of cases, showed tuberculous lesions. We find of these 269 cases, 117 or no less than 43 per cent. occurred at the milk-drinking period of life, namely during the first two years of life, and 56.5 per cent. occurred in the first three years. Undoubtedly the main incidence of tuberculosis in the young corresponds more or less exactly with the period in which milk forms, or should form, the chief article of diet, and as Still quotes from a report on tuberculosis, presented to the Council of the British Medical Association, "the mortality from tuberculosis in early childhood is not decreasing as it is at other ages in the United Kingdom, and the opinion that this great prevalency of the disease in childhood is due to infection through the alimentary canal by milk from tuberculous cows, appears to be well founded."

But now let us analyse Dr. Still's very careful studies upon the sequence of infection. To determine such sequence is a difficult matter, because tuberculosis in children so rapidly tends to become generalized, and it is difficult to make out which are the oldest and which the more recent lesions. But a study of the lymphatic glands affords material aid; thus, large cheesy or caseous masses in a mesenteric gland with scattered tubercles in the peribronchial glands indicates that the intestinal lesion is the older, and conversely, if the peribronchial glands be the more affected, infection has been more probably through the respiratory tract. Tubercular adenitis of the larynx and tubercular ear disease would also appear to be mainly due to infection through the air rather than the food. Thus of the 269 cases above referred to the channels of infection were as follows:

RESPIRATORY:			
Lung	105	138	153 = 57.2 per cent.
Probably Lung	33		
Ear	9	15	
Probably Ear	6		
ALIMENTARY:			
Intestine	53	63 = 23.4 per cent.	
Probably Intestine	10		
OTHER CASES:			
Bones or Joints	5		
Fauces	2		
Uncertain	46		
	269		

It thus follows that respiratory rather than alimentary infection is the commoner in children in about the ratio of 57.2 to 23.4. While this is the case it must also be admitted that the proportion of cases of alimentary infection is relatively high, so high as to make it very probable that the staple food of children, namely, milk, does play a part in the spread of the disease.

When now we come to examine the individual cases there are some which it is very difficult to explain unless we assume that infection has been through the milk. But while admitting this we have to confess that with scarce an exception the evidence afforded is not absolutely exclusive of possibility of infection by other means.

Demme records a case of four infants in the Children's Hospital at Berne, issue of sound parents, without any tuberculous ancestry, who died of intestinal and mesenteric tuberculosis as the result of feeding on the unsterilized milks of tuberculous cows. These were the cases in which he was able to exclude the possibility of other causes for the disease and was satisfied that the milk alone was to blame.

The Cattle Commissioners of Massachusetts give reference to a case of an infant, son of a college mate of one of their body, a comparatively strong healthy child of twenty-one months, who, visiting a relation for a week, drank unsterilized milk of a cow which was soon after condemned and killed in a state of generalized tuberculosis; this child died three months later with mesenteric tuberculosis. Only distant relations had died of this disease and the child had seen but one of these and that for short intervals. A second child of the same family brought up on sterilized milk remained in robust health; the parents were free from the disease Even in a case like this, convincing as it seems, more information is required with regard to the nurse and servants of the household, the possible existence of any case of tuberculosis in the house of the relation visited, and so on.

Ernst quotes similar cases. Olliver's well-known case, quoted in the *Semaine Medicale* of February 25th, 1892, is also not quite perfect. The case was that of a girl of apparently healthy parentage and previous surroundings, who died of meningeal tuberculosis. She was educated at a boarding school where thirteen pupils had been ill with, and then had died of, tuberculosis within a few months. The milk supplied to the school was from cows kept on the premises; these animals upon examination were found to have tubercular disease of the udders and to suffer from general tuberculosis. Here, for example, it might be urged that under school conditions one girl might easily convey the disease to the other. The swiftness, however, with which the disease affected simultaneously a large number of individuals, is on the whole, in favor of regarding the disease as having been brought about through the milk. Thus the evidence, while not absolutely convincing, is strongly in favor of the view that tuberculosis can be conveyed

through the milk of animals extensively diseased, and this being the case, we cannot sit with hands folded and regard the extension of bovine tuberculosis with indifference, but must make such regulations as will diminish the possibility of such infection.

3. *What are the more frequent modes of Infection?* Naturally apart from actual contact with the diseased animals and their products, the commonest modes of infection are by the animal products used as food, namely, the meat, milk and milk products. There are but a few words that I wish to say in this connection. The infectiousness of meat may be rapidly dismissed. Sims Woodhead and the British Royal Commission have shown that while the ordinary cooking of meat is sufficient to destroy tubercle bacilli, and while thus in English-speaking countries the danger of infection from this source is reduced to a minimum, it nevertheless may happen that the portion of a large joint in the centre may not be subjected to a temperature sufficient to kill the bacilli. At the same time the report from the same Royal Commission shows clearly that even in fairly well advanced cases of tuberculosis the bacilli are present but in small quantities in the meat itself; in fact, muscle is one of the last tissues to become the seat of the tubercular process. They show that the great danger is not from the existence of tubercles within the meat but of contamination of the surface in the process of dressing, by the knives and hands of the operators becoming smeared with material from other regions which are the seat of extensive disease.

When such susceptible animals as guinea-pigs, fed directly with the expressed juice of raw meat, do not thereby become infected, it is, to say the least, little likely that cooked or even partially cooked meat can set up infection in man. Where the disease is so far advanced that the meat may become dangerous to humanity there is little likelihood of such meat being exposed for sale or employed as a food.

With milk, the problem presents several difficulties. Accepting it as a fact that this can convey infection, the conditions under which it does so are, I think, not generally recognized. Thus the British Royal Commission lays it down that only when the udder is diseased does the milk become infectious, and would suggest that the withdrawal from the dairies of cows having any disease whatever of the udder, would form some approach to security against the serious danger incurred to man by the use of tuberculous milk; "but it would not be an adequate security." The report further states, "if the expert finds tubercle bacilli in the milk, the cow has dangerous tuberculosis of the udder; if he does not find them, he may apply a further test by inoculating some susceptible animals with the milk and thereby learning the nature of the udder disease. By this test he will rarely be misled."

In this conclusion the British Commission strongly supported Nocard's opinion upon this subject. But this view that the tubercle

bacilli only pass into the milk when there is disease of the udder, I feel convinced is founded upon imperfect knowledge. This conviction is based upon the results of observations conducted by Dr. C. F. Martin and myself for the Dominion Government during the course of last year.*

On ten cows placed at our disposal by the Minister of Agriculture necropsies were made, and we could not find a trace of a single tubercular focus in any one of the udders, and that notwithstanding very careful study and examination. Any part that upon section looked to us the least suspicious, was subjected to examination under the microscope. Yet in the milk of two of these cows we detected bacilli in fair numbers, in four others on certain occasions we saw forms which we were compelled to describe as undoubted bacilli, and what is more, two of the guinea-pigs inoculated with milk from the cow which showed the greatest number of bacilli, undoubtedly succumbed to tuberculosis. It is true that the majority of the animals inoculated with this same milk remained perfectly free from the disease, *i.e.*, of twenty-nine guinea-pigs and twenty-six rabbits inoculated intraperitoneally with varying quantities, only two guinea-pigs succumbed, while again a calf, fed solely with the milk from this cow, remained in perfect health although fed for five months. Had only this cow shown no sign of tuberculous disease of the udder we might have thought that our failure to recognize it was due to insufficient examination, but the same absence of udder disease was seen in the case of the other cows which afforded the bacilli.

Since publishing our report Rabinovitch and Kempner have contributed to the Congress of Tuberculosis at Berlin a paper in which, by inoculation into guinea-pigs, they came to a similar conclusion. Taking fifteen cows which had reacted to tuberculin, receiving the milk direct into sterilized glasses and inoculating guinea-pigs with a mixture of the precipitate and creamy layer after centrifugalization, they obtained the following results:

From ten of the animals (66.6 per cent.) they obtained a positive result, but of those animals only one showed clinically definite tuberculosis of the udder, and one other showed udder tuberculosis under the microscope. Of the remaining eight cases three were found at necropsy to present advanced generalized tuberculosis without tuberculosis of the udder, one showed slight tuberculosis, and the remaining four only presented either dubious or absent clinical signs of the disease. They thus come to the conclusion that tubercle bacilli can pass into the milk even in the early stage of tuberculosis in which there is no recognizable disease of the udder as also in cases in which the disease can only be detected by the tuberculin reaction.

It has been objected in results of this nature that the bacilli in these cases are not truly tubercle bacilli, but are contaminations of

* Report of the Minister of Agriculture of the Dominion for the year 1898. Ottawa, 1899.

a relatively non-pathogenetic form. Thus, as has been pointed out recently, there may be present in milk a bacillus which microscopically is undistinguishable from the true tubercle bacillus, and which, when inoculated into guinea-pigs, produces a disease and frequently death with symptoms very similar to those of true tuberculosis. But to animals other than guinea-pigs, this bacillus is not harmful, and probably it has no effect on man. Only by fuller experimentation is it possible to distinguish between these two forms of organism, and it is urged that, recognizing the presence of this false bacillus in milk and butter, experiments such as those above described are open to serious question. Indeed, some go so far as to claim that nearly a'l the fatal results obtained from inoculating butter into guinea-pigs, have been due to this false bacillus and not to the true one.

Such a bacillus has been isolated from ordinary Timothy grass, and undoubtedly resembles very closely the tubercle bacillus, but herein comes the difficulty in accepting this explanation for our experiments and those of Rabinovitch. In our case the udders were carefully washed with creolin before milking, and whereas the milk was first passed through a sterilized funnel into sterilized bottles which we brought immediately to the laboratory, later the milk was received direct from the cleansed udder into the sterilized bottles. There was here practically no chance for contamination of the milk, unless indeed it be held that this false tubercle bacillus is a normal inhabitant of the larger milk ducts. Rabinovitch and Kempner took similar precautions. It is also interesting to note, in the second place, that we found a relationship between the number of bacilli present in the milk and the extent of the tuberculous process in the animals. The two animals in whose milk we found the bacilli most extensively present were those showing most extensive disease of the lungs. Such a relationship would be impossible were we dealing with contamination. Thus I can only fall back upon the belief, that just as I have recently shown that the gland cells of the liver and of the kidney take up and discharge the colon bacilli, so the cells of the actively working milk gland in cattle have a similar power; and just as I find that the colon bacilli tend to be attenuated in their passage, so would I ascribe the somewhat altered appearance of these tubercle bacilli in milk of animals not suffering from udder tuberculosis to direct action upon them in the process of excretion, and would recognize that their lowered infective powers are due to the same result. At the present moment at the Experimental Station at Outremont, Dr. Higgins and I are putting this view to the test.

For myself, therefore, I cannot but come to the somewhat unsatisfactory conclusion, that whereas, in the first place, the milk of animals not suffering from udder tuberculosis may contain bacilli, nevertheless such milk is not of high infective power, and that, therefore, the frequency with which the bacteriologist may by *inoculation* into the very susceptible guinea-pig find the milk to

be infectious, it is not absolute indication of its danger when employed as a food for man. Only when there is recognizable udder tuberculosis and active tubercle bacilli are discharged into the milk in enormous numbers in consequence of ulcerative changes occurring in the tubercles, is there real danger. For practical purposes, therefore, I agree with Nocard, that as regards the milk-supply local tuberculosis of the udder is what has to be most especially guarded against, and this, not because the evidence at our disposal affords absolute proof of the transmission of tuberculosis from cattle to man, but because the trend of the evidence is all in that direction.

On the Extent of Tuberculosis in Canadian Cattle.

So far as I can see there is no large tract of country in the North Temperate Zone in which cattle are so free from tuberculosis as are our Canadian cattle, unless it be the Western States. During 1898 the testing of cattle was encouraged to the utmost possible degree by the Government, and as is natural, the applications for inspection came more especially from those districts in one or other part of the Dominion where they had reason to fear the existence of the disease. In these "suspect" districts and "suspect" herds over ten thousand head of cattle were inoculated, and of these only 5 per cent. reacted. Further, of ninety thousand cattle inspected at Montreal during 1894 on the eve of debarkation, at a time when, in consequence of the active measures taken by the British Government against importation of Canadian cattle on account of suspected pleuro-pneumonia—a disease which I may add is absolutely non-existent here—at a period, that is, when great care was being taken not to export animals showing any infectious disease, only eighty animals were rejected by the inspectors, and of these eighty two were recognized as suffering from tuberculosis and even in them this was local. I do not mention these last figures as giving an absolute indication of the incidence of tuberculosis in Canadian cattle, but this I do say, that no other civilised country could now-a-days ship ninety thousand cattle under like conditions and have only two of the number rejected for clinically recognisable tuberculosis.

Similarly that same year the lungs of 2,504 animals were examined in the abbatoirs of Montreal, St. John, N.B., and Halifax, N.S., and among these there were only fourteen cases of tuberculosis or a percentage of 0.6. There is, I say, no other country which can show such low figures. One reason for this is that for now some years great care has been exercised in insuring that animals imported for breeding purposes are absolutely healthy. Another is that the keeping of animals within town limits, cooped up in dairies, is almost unknown, and yet another reason is that our animals in general have abundant pasturage and roam over wide areas; during the greater part of the year they live in most healthful conditions.

Were any other indication needed with regard to the rarity of tuberculosis in our cattle, it is to be found in the following fact. For purposes of investigation of the Experimental Farm at Outremont, in order that Dr. Higgins and I could compare the infectiousness of milk from animals with advanced disease of the udder, as compared with that from diseased animals not showing such udder trouble, it is absolutely necessary that we should obtain one or two cows showing udder disease. This most important portion of our investigations is at a standstill, merely because we cannot obtain such animals. We have only heard of one small collection of cases, which we could not utilize, as a matter of principle, because the owner, hearing that they were necessary to us, immediately demanded a ridiculous price. But Dr. McEachran, the Chief Inspector, with the authority of the Minister, has sent detailed orders to all the inspectors over a large area of country, asking them to look out for and report any such advanced cases. That was some months ago, and still we are waiting to obtain these cattle.

Prevention of Tuberculosis

The rareness of tuberculosis among our cattle makes it possible to hope for a complete eradication of the disease. In the Old World, where the disease is so common, such eradication appears chimerical —not only so, but is absolutely impracticable ; and there to begin a crusade of extermination and to slaughter every animal giving the tuberculin reaction would ruin the farmers—and would also ruin the Governments. To slaughter only animals showing clinical symptoms would be but a sop in the pan ; it would certainly not extinguish the danger of contagion and the slow spread of the disease. To restrict the movements of animals reacting to tuberculin would mean placing the whole country under the ban, and would absolutely paralyse the cattle industry.; while again, to compensate the farmers for the condemned animals would be found the cause of great dissatisfaction. The disease is so lingering and the eventual emaciation so marked that it is very difficult to arrive at any conclusion as to what was the original value of the animal. The most that can be done there is to introduce what is known as Bang's system, namely, that of separating the healthy from the diseased animals in separate byres, keeping them apart, and gradually, as the diseased animals die off, replacing them in the sound herd by animals which do not react, and also by adding to this sound herd the calves born to the diseased stock, it having been found that such calves, removed immediately from their mothers, show almost without exception no sign and no tendency towards the disease.

Now, on the other hand, returning to Canada, the disease is so rare that Dr. McEachran calculates that probably throughout the Dominion but 10,000 animals show clinical symptoms, and this is probably an excessive estimate. Were there 10,000, and were these to be slaughtered, even at full value compensation would not exceed $250,000. Those reacting to tuberculin would be, of course, more

numerous, but of these 70 per cent. at least, if not a much higher percentage, could be fed and slaughtered for beef under supervision, while in the case of highly bred cattle reacting to tuberculin, in which no clinical symptoms are discoverable, they could be kept in isolated buildings and treated and bred from under Bang's system.

I cannot but cordially endorse Professor McEachran's opinion that by the expenditure of an amount of money, trifling in itself, as compared with the enormous benefits that would accrue both to the live stock industry and to the people of Canada, the disease could be practically eradicated in the course of three or four years.

Leaving out of account the hygienic importance of such eradication, "45 per cent. of the population of Canada is engaged in rural pursuits; the railways depend upon agriculture for one-fourth of the freight they carry, and the canals one-third. As regards the shipping industry, more than half of the total exports are agricultural products, the value of which for 1897 amounted, according to the Year Book, to the sum of $44,533,592. . . Surely no reasonable expenditure," to quote Dr. McEachran, "can be withheld to eradicate a disease that interferes with the development of an industry of such importance to the country's prosperity." And when, in addition to this, we regard also possible danger to the health of humanity, surely it is our duty, as medical men, to support strongly any attempt on the part of the Government to bring about the prevention of this disease in cattle.

I am most anxious that it be understood that I speak as a private individual, but at the same time as one who has for the last two years continually studied the subject in its various aspects. If it seems overbold and too large a project to introduce this attempt to eradicate the disease simultaneously over the whole Dominion, *at least, it seems to me, that the endeavor might be started in well-defined areas, Prince Edward Island, for example, Cape Breton, or Nova Scotia.* And if what I have stated be correct—and our observations in Montreal entirely confirm those of Professor Theobald Smith—if cattle show but a transient and slight, and not an ulcerous and infective disturbance when inoculated with what are truly enormous numbers of tubercle bacilli obtained from man; if cattle thus are relatively insusceptible to the human disease; then the disease may be either eradicated or kept absolutely in check even although tuberculosis continue to prevail among the inhabitants of the districts mentioned, without adequate endeavors to arrest its spread among them.

A corps of inspectors might be empowered to make a complete and perfect visitation, to kill off and compensate for all animals showing clinical evidence of the disease; to isolate or buy at full value, and place on Government reserves all animals reacting to tuberculin, according to the condition of their owners and their capacity or incapacity to undertake this work for themselves; to disinfect all byres in which infected animals have been discovered; to prevent

temporarily the entrance of animals into the areas visited after undergoing tuberculin test, and thereby to demonstrate whether these areas can be rendered absolutely exempt from bovine tuberculosis.

I believe that this can be done, and done at a cost relatively so small as to be incommensurate with the accruing benefit. *For if we in Canada can establish herds absolutely free from the disease, this means that in a very few years Canada will become the great centre for the breeding of high-class cattle, and European countries will have to come to us to re-establish their herds.* They cannot do it at home. We only, and only we, are in a position to make a fruitful endeavor to get rid of the disease in the course of three or four years. Possibly this statement is too sweeping, for there is a similar relative freedom from tuberculosis in the Western States, and by strict quarantine and rigorous inspection and regulations preventive of the entrance of untested animals, certain of those States might free themselves from this disease at a relatively small cost. But none of the States has the same favorable geographical position for testing the matter as we possess in our large islands and peninsulas—Prince Edward Island, Cape Breton and Nova Scotia. The absence of natural boundaries must necessitate extreme care in the individual States as at any time the disease might reassert itself. In any case it is for Canada to make the endeavor.

AN INQUIRY INTO THE ETIOLOGY OF CHRONIC BRIGHT'S DISEASE.*

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THE subject of chronic Bright's disease is one of ever-recurring interest. It is at once the bug-bear of the clinician and the despair of the pathologist.

The few remarks which I have the honor to present in this connection to this Association are based on a somewhat extensive study, made largely from the standpoint of the pathologist and experimentalist. Owing to the limited time at my disposal now, I can only hope to indicate to you, in the merest outline, the facts which I have gathered, and the conclusions I have based upon them, referring any who may care to enter into the subject in more detail to the original contribution which appeared in the *Montreal Medical Journal* for March, 1899. Since that paper appeared, however, a few new facts have been elucidated, and my original ideas have been modified.

My interest in the matter was kindled by the now well-known researches of Prof. Adami, of McGill University, on cirrhosis of

* Prepared for the Canadian Medical Association Meeting, Toronto, 1899.

the liver, in which he demonstrated in cirrhotic livers, and later in normal ones, the presence of a minute micro-organism which tended to take a diplococcus form, and which he was inclined to regard as of etiological moment in the production of fibroid changes in this organ.

It struck me that a similar cause might be at work in the case of fibrosis of the kidney, and to the elucidation of this point I have been for some months, and still am, devoting myself. At present I am only able to advance a theory, but a theory which is supported by all the facts that I have been able to collect, and negatived by none. The complete mathematical proof may come later. Still the investigation is, I think, novel, and most suggestive.

With regard to acute nephritis, upon which there have been multitudinous studies of late years, we have probably attained something like the truth—the whole series of "infections," and mineral or other toxins being the etiological factors concerned, in the vast majority, if not in all the cases. The origin, however, of the chronic forms, and their relationship or otherwise to the acute stage, may be said to be largely unknown.

The clinical symptoms, the character of the urine, give us merely the roughest sort of information, and every pathologist knows how difficult it is to predict the actual condition of the kidneys from the clinical examination in any given case. Indeed, the confusion of the whole subject may be inferred from the numerous attempts at a rational classification of the various forms of kidney inflammation which have been proposed, all of which differ more or less in important particulars.

This, I am inclined to think, is the result of too limited a view, and the failure to realize the different factors in the problem. To have any degree of comprehension of the disease, clinical studies, histological examination, bacteriology and experimental work must be laid under contribution.

In the case of true acute nephritis, the trend of the investigation of the past fifteen years points strongly to the unity of the process as a result of various microbic infections.

When we come to consider the production of chronic nephritis the task becomes more difficult. It is usual to teach that the acute cases may become chronic, and that the cirrhotic kidney is an end-stage of the chronic parenchymatous nephritis, or is due to arterial disease, or again, to certain poisons, as alcohol, gout and lead. (The "primäre Schrumpfniere" of the Vienna School.) This does not, however, explain all the cases; cases of contracted kidney occur where there was no history of any acute attack, and ran an insidious course. And again, cirrhotic kidneys may occur in children, where there could be no question of arterio-sclerosis, or chronic intoxications from mineral substances.

Further, the cirrhotic kidney has been known to result from infective diseases, as pneumonia (diplococcus) and influenza. The

etiological elements in this form then seem to be very various, and the course apparently without any fixed rule.

While it is generally admitted that acute nephritis is, in the immense majority of cases, due to some infective agent, as yet, I believe, no one has ventured to say that chronic Bright's disease is due to the direct action of bacteria.

With a view of gaining further information and ascertaining whether bacteria were present or not in the various forms of Bright's disease, I have availed myself of the pathological material of the Royal Victoria Hospital from about 325 autopsies, and also the clinical notes of all the cases of nephritis in the wards for the past four years.

In approaching this investigation, I have thought that more valuable information would be attained by examining sections of kidneys which presented evidence of nephritis microscopically, in addition to those which were taken from cases which were recognized clinically. For by this means one gets a wider view of the subject, inasmuch as the study embraces all grades of the disease from the incipient forms up to the most advanced stages. Particularly valuable is the study of the early stages, since it is only thus that a true appreciation of the process can be formed.

Sections were made from 105 kidneys presenting the various forms of nephritis. All cases in which there was cystitis or any evidence of an "ascending" infection, or local tuberculosis, were excluded as unnecessarily complicating the subject.

Some of the material in early years was hardened in Müller's fluid, so that many kidneys presented evidence of *post-mortem* growth of bacteria; these were excluded in drawing conclusions. The material, however, which was hardened in Formol-Müller was satisfactory. All cases in which there was clearly a terminal infection, as shown by plugs of bacteria in the capillaries, were also excluded.

The method of staining was as follows:

Celloidin sections, cut as thin as possible, were placed in carbol-thionin for from twelve to twenty-four hours in the incubator. The formula of the stain was:

Solution of carbolic acid	(1:40), 100 cc.
Thionin	1 gramme.
Filtered as used.	

The sections were then decolorized in weak acetic acid, dehydrated in aniline oil, washed in xylol and mounted in balsam.

Those sections in which pus cocci, or micro-organisms positive to Gram, were suspected, were also prepared by the Gram-Weigert method. The results were very satisfactory. The sections were examined by 1-18th Reichert oil-immersion lens and No. 4 eye-piece.

Confining my remarks to chronic cases, there were the following results:

Chronic parenchymatous	8	cases.
Chronic diffuse	11	"
Chronic glomerulitis	1	"
Chronic interstitial	10	"
Arterio-sclerotic and senile	13	"
Amyloid fatty kidney	2	"

In the eight examples of chronic parenchymatous nephritis, four showed minute diplococci with a delicate halo mostly between the lobules in the cortical area. Of these, one case, which was associated with atrophic cirrhosis of the liver, showed a few well-marked minute diplococci with a halo. In two, one an alcoholic kidney, bacilli of doubtful nature were seen. Two others gave negative results.

The chronic glomerulitis case showed a slight acute interstitial inflammation as well, and a few rare diplococci were seen. The primary disease was septic peritonitis.

The amyloid fatty kidneys showed no germs.

Still more interesting and suggestive were the results found in the chronic diffuse, chronic interstitial, and the arterio-sclerotic type of the disease.

In the chronic diffuse nephritis, bacteria were found in all eleven cases. In two there were rather large diplococci, which might be the diplococcus lanceolatus, as a lobar pneumonia was present. In five, small diplococci; in four, short stumpy bacilli were seen with polar staining closely resembling the B. Coli. These were situated in the areas of round-celled infiltration, beneath the basement membranes of the tubules, and in one case within the lining cells of the secreting tubules.

One case, in which the small diplococcus form was seen, was associated with atrophic cirrhosis of the liver.

There were ten cases of chronic interstitial nephritis. In all were found the minute diplococci with a halo, mainly in the areas of round-celled infiltration, some few within the Bowman's capsules, and in one case within the cells of the tubular epithelium.

Figs. I. and II., Plate I., show very well the diplococci in the small-celled infiltration. In the thirteen arterio-sclerotic and senile forms, three gave negative results, but the specimens were very poor; nine showed small diplococci with a halo, chiefly in the areas of round-celled infiltration, and also in one case in a glomerular capillary; in another, within a Bowman's capsule; and in a third within the lumen of a secreting tubule.

In two of the cases besides there were noted bacilli of varying forms. These were diplo-bacilli of small size, very short bacilli with rounded ends, a slender form with polar staining, and others large and curved conforming well to the usual appearance of the B. Coli.

To sum up, in the 45 cases of chronic nephritis of all forms, minute diplococci, as a rule with a distinct halo, were seen in 29, and bacilli having the ordinary appearance of B. Coli in 4 more.

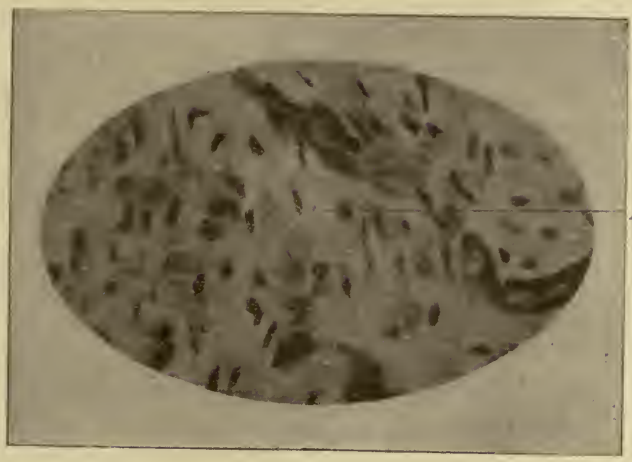


PLATE I., FIG. I.

Reichert oil-immersion 1-18th. Without eyepiece.

Kidney. Area of round-celled infiltration showing minute diplococci at A.

Patient, a male, aged 27; clinically a chronic nephritis of one year's standing; there was a history of repeated exposure to wet and cold. The kidneys were of the large white variety passing into the contracted stage; microscopically a chronic diffuse nephritis.

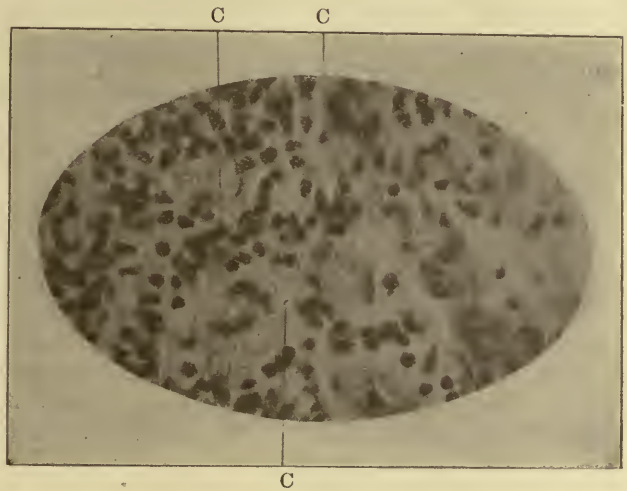


PLATE I., FIG. II.

Kidney. Area of round-celled infiltration showing a diplococcus at C.

Patient, a female, aged 21; clinically a chronic nephritis of eight months' standing; onset insidious. Kidneys were extremely contracted; microscopically extreme interstitial nephritis.

In only 6 were no bacteria seen, but this might easily be due to poor sections or errors in technique, for it is difficult in a large series of sections to get perfectly even results.

These diplococcus forms were very minute, and might easily be overlooked with an ordinary 1-12th immersion. Sometimes it could be made out that they were really very short, fine bacilli with polar staining, the intervening substances being almost colorless. They were generally in the areas of interstitial round-celled infiltration. Rarely I have seen them within the Bowman's capsules, and within the secreting cells of the contorted tubules; on one occasion within a lumen. The halo was probably not a true capsule, but due to the effects of refraction.

As to the nature of these diplococcus forms, it may be said that they are identical in appearance and size with the diplococci which Adami has found recently in the liver, associated with progressive portal cirrhosis, and which he has proved to be a variant of the colon bacillus. His very important investigations appeared in the *Montreal Medical Journal* in July, 1898, the *British Medical Journal* for October, 1898, and the *Lancet* of August 13th, 1898. He found diplococcus forms in all livers which stained a brownish hue and were probably dead forms, while in atrophic cirrhosis of the liver they were increased in number and stained well. He has, I think, established the fact that these forms are really a modified colon bacillus, and that the liver in health is constantly excreting them, thus constituting a chief barrier of defence against bacterial infection from the gastro-intestinal tract.

With a view to discover if the colon bacillus is to be found in the urine of nephritis cases, I have examined the urine in one case of acute hemorrhagic nephritis, and in one of chronic interstitial. The method employed was to sterilize the meatus and glands penis, then to allow the patient to pass several ounces of urine and collect the residue in sterilized flasks. These were then sealed and placed in the incubator for 48 hours. In the first case I obtained the colon bacillus, but it died out rapidly, and I was not able to study it very closely.

In the second case, the chronic interstitial, various forms were found, as seen in Fig. I., Plate II. These were stout bacilli, either straight or curved with rounded ends, some with polar staining; they all resembled the ordinary colon forms. Besides these there were small ovate bacteria, and shorter, more delicate bacilli with polar staining. There were also short chains composed of very short bacilli with rather blunt ends showing polar staining. All were negative to Gram. A broth transfer was made, and after 48 hours all the usual forms of the B. Coli were seen with the addition of minute diplococci with a halo. These, owing to the crescentic form of the stained portions, resembled gonococci. Small diplococci with halos were seen, exactly resembling those seen in the sections, also a similar diplococcus, but larger.

When transferred to agar for 48 hours, a thick tallowy growth was produced, and microscopically the germs were short oval bacteria, very small, with the 1-12th oil immersion exactly like cocci; also numerous minute diplococcus forms. No bacilli were seen. (*Vide* Fig. II., Plate II.) This was transferred to a bouillon made from kidney reacting, 1.5 per cent. acid to phenolthalein; this showed minute diplococci with halos, diplobacilli, a slender bacillus with polar staining, and besides these, the ordinary typical colon. (Fig. I., Plate III.)

Cultures from the coccus and diplococcus forms were made on broth, milk, potato, glucose, agar and litmus agar. They showed that in all respects the organism reacted like the B. Coli, with the exception that indol was not produced. Unlike Dr. Adami's diplococcus, this one produced a very heavy growth on agar.

When grown with sterilized bile on agar, the cocci and diplococci seen were even smaller than those produced on plain agar.

With regard to the presence of B. Coli or other germs in the urine of chronic nephritis, information is lacking, and my investigations on this point are still going on, being hampered at present for want of enough clinical material. Still, in the cases I have examined I have found the colon bacillus, although as is well known, it is also present in other conditions, notably cystitis, nephrolithiasis and pyelonephritis suppurativa.

The presence of the colon bacillus so generally in the kidneys, which I have studied, receives additional importance from the fact that in this study I have been careful to exclude all cases in which there were cystitis, suppurative pyelonephritis, and tubercular abscesses—conditions in which there is apt to be an "ascending" infection with the colon bacillus. We must then conclude that the infection is a "descending" one by way of the blood stream. That the presence of the colon bacillus is to be explained as a terminal infection or a *post-mortem* overgrowth, I do not believe, for it is easy to eliminate cases of this kind as I did very freely, for the differences are quite distinctive. In *ante-mortem* terminal infections, the germs are largely in the capillaries, often forming large plugs, and consist of large fat bacilli, short bacilli, or sometimes diplococci, but always much larger and staining more deeply than the diplococcus forms I describe. Further, there is no evidence of inflammatory reaction about these large bacteria, while in the case of diplococcus, they are enclosed by an inflammatory round-celled infiltration. Neither is it a *post-mortem* growth, for in this case, the germs are in the superficial cortical layers, and are always much larger and different in appearance and staining powers. Such germs can be seen with an ordinary No. 7 objective, while the diplococcus requires the 1-12th oil immersion at least. or better the 1-18th. Then again, the diplococci are always very few in number, perhaps only five or six in a section.

That the process in chronic nephritis with productive inflammation is due to an embolic infection is strongly supported by the



PLATE II., FIG. I.

Original growth of B. Coli from the urine of a patient with advanced chronic interstitial nephritis. Shows colon bacilli of the ordinary type, bacilli with polar staining, cocci and diplococci; also chains of minute bacilli with polar staining. Taken from a flask in which the urine had been allowed to stand three days at 37°C.



PLATE II., FIG. II.

The same organism as last transferred to 1.5 per cent. acid agar for 48 hours. Now single cocci and diplococci.

histological features in the sections I have studied. The lesions in the chronic forms are identical with those in the acute interstitial as to their anatomical distribution.

In the great majority of the acute interstitial and acute mixed varieties, the areas of round-celled infiltration are to be found around the glomeruli, or around the afferent vessels and interlobular arterioles exactly as would be expected in an embolic infection. The same holds good for the chronic cases. In the arterio-sclerotic type, that the infiltration and proliferation is mostly confined to vascular districts needs only to be mentioned. In the early stages of the chronic diffuse nephritis one sees the inflammatory exudation in the same way about the afferent blood vessels, associated with connective tissue hyperplasia. The cells of the Bowman's capsules proliferate, causing atrophy and hyaline degeneration of the glomerular tuft, or we get small fibrous patches about the vessels between the contorted tubules.

In both acute and chronic forms the vessels of the affected areas often show marked congestion. Later on, in the chronic interstitial type (contracted kidney), the fibrous tissue overgrowth is so generalized that this relationship to the blood vessels can no longer be made out. In my series the process could be accurately followed out.

What is the starting point then of this colon bacillus invasion? The most obvious is the intestine. We have ample evidence that intestinal disorders can cause acute nephritis. It occurs in gastro-enteritis, and in cholera Asiatica, for instance.

Ebstein (*Deut. med. Woch.*, June 15th, 1897) discusses acute nephritis as a complication of chronic gastro-enteritis. In a case he records in a woman aged 27, there was a history of diarrhea for nine months previously, pain in the epigastrium and anorexia for six. The nephritis came on most acutely, and was fatal in a few days from eclampsia, coma and collapse. At the autopsy acute nephritis was found, a tapeworm in the intestine, acute follicular ulcerative enteritis and enlargement of the mesenteric glands. The spleen was normal. Influenza and all other infections as a cause were excluded, and Ebstein concluded that the condition was due to an intoxication from the intestine.

Dupeu ("Acute Nephritis in Children," *Jour. de Méd.*, July 10th, 1897), states that acute nephritis may be a result of ordinary gastro-intestinal intoxication, particularly when there is dilatation of the stomach. It has been observed in children as young as eleven to sixteen months fed by the bottle, and in whom vomiting and diarrhea were prominent symptoms. In these cases it may last two to four weeks, and present all the usual features of Bright's disease.

With a view to determine the relationship, if any, of various gastro-intestinal disorders to nephritis, I have examined carefully the clinical records of the Royal Victoria Hospital for the past four years, having access to these through the courtesy of Prof. Jas.

Stewart. In making the estimate I have been careful not to accept as an etiological factor the nausea, vomiting and diarrhea, which so often usher in or complicate an uremic attack, but I have endeavored to find out if there was any history of such disorders existing for lengthened periods which might reasonably be regarded as of etiological moment.

There were seventy-one cases of nephritis of various forms divided according to the reports as follows:

Acute parenchymatous nephritis	10
Sub-acute parenchymatous	15
Chronic parenchymatous	17
Chronic interstitial	29

The etiological factors were:

Chronic alcoholism	15 times
Dyspepsia (gastro-enteritis, nausea, vomiting, etc.)	15 times
Infectious diseases (influenza, acute rheumatism, diphtheria, typhoid)	11 times
Exposures to wet and cold, or to extremes of temperature	5 times
Appendicitis	Once
Puerperal eclampsia	Twice
Gastralgia	Once
Acute gonorrhea	Once
Chronic gonorrhea	Once
Insidious (no definite cause)	22 times

Thus it will be seen that of the seventy-one cases studied, twenty-nine were subsequent to gastro-enteric disturbances, assuming as one fairly may that such would be present in the chronic alcoholics. This is a percentage of 40.84 per cent. of all cases. Excluding the acute cases due to the various infective fevers in which the etiology is quite established, the proportion becomes 50 per cent. In 30.98 per cent. the onset was insidious, and no cause could be assigned.

These facts go far to show that there is a definite relationship between nephritis and disorders of the alimentary tract, for when we consider that there were in the records no special investigations made to establish such relationship, but merely the ordinary routine investigation, the above figures become invested with even greater importance. Further, there were very few of these gastro-intestinal disorders acute in character, but in most there was a history of such symptoms extending over periods of months or years.

Clinical evidence then strongly supports the view that chronic Bright's disease, and indeed acute, may be a result of some long-standing gastro-intestinal disorder, 50 per cent. of cases giving this history, 30 per cent. of cases are insidious in onset, all the usual causes being absent; such might be called "cryptogenetic forms." Can these be due to an infection from the intestine? It is very probable, but the clinician must further elucidate this point by a more careful study of the history.

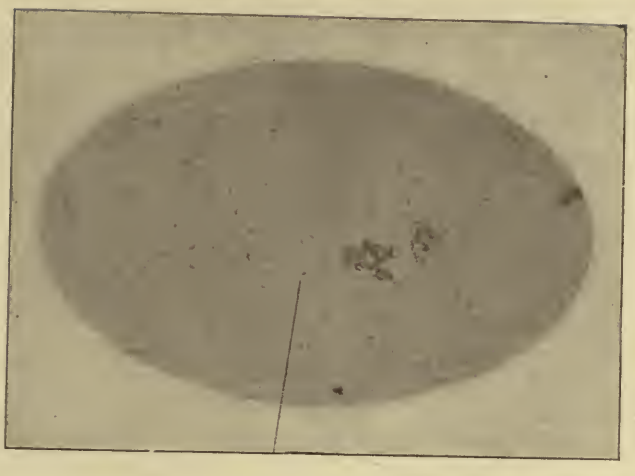


PLATE III., FIG. I.

Same as last on kidney bouillon 1.5 per cent. acid. Ordinary colon forms and minute diplococci.
NOTE.—The diplococci in the sections and in the slides from the cultures when viewed by transmitted electric light were seen to be really minute short bacilli with polar staining.



PLATE III., FIG. II.

Acute parenchymatous nephritis in acute lobar pneumonia.
Figure shows part of a glomerulus with numerous diplococci of pneumonia in a capillary.

We have distinct evidence that bacteria can pass into the general system even in health. In the case of livers and kidneys of normal rabbits removed antiseptically, and prepared with all due care, careful search reveals bacteria, particularly these diplococcus forms as I have verified over and over again. In the case of the kidney, however, these germs are very scanty. Further, on removal of a small bit of mesentery in the case of two healthy rabbits, prepared with all antiseptic precautions, and stained, crowds of bacteria could be seen massed in the lymphatic channels. If a lesion of the intestine exists the same holds good.

It is almost impossible to get perfectly normal kidneys in a *post-mortem* room, but I have examined a few for diplococci in which microscopically the tissue showed no abnormality. In ten such sections, seven showed no germs; three showed rather rare diplococci similar to those in the nephritis cases, but on further examination I found that in one case there had been a hernia operation, and there was an acute local enteritis; in the second there had been a gastrotomy performed, and there was local peritonitis; and in the third a spina bifida had been removed. Thus in two there could have been infection from the intestinal tract.

Further, in a healthy rabbit, killed suddenly, cultures were taken from the liver and kidney, and staphylococci and colon bacilli were demonstrated. In this case the organs, including the intestines, appeared quite healthy, but there was a very slight degree of diarrhea.

It is generally taught that the bacillus coli from the healthy intestine is non-pathogenic. To produce nephritis, then, something more is needed than the mere passing into the general circulation of the bacillus coli.

The experiments of Macaigne, Klecki, and Sanarelli prove that if the intestine is injured the virulence of the bacillus coli is increased.

Anything then which causes a loss of the lining epithelium of the intestine with increased virulence of the germ, provides the starting point for a systemic infection. That this often happens is beyond doubt. The occurrence of pneumonias due to colon infection is well recognized in strangulated hernia, and in septic peritonitis due to the same germ, the bacillus coli has been found in all the organs of the body including the kidneys.

The usual line of infection is through the mesenteric glands and liver, which thus constitute the first barrier of defence, either through the portal blood or by the bile ducts or both; further, it may take place through the abdominal lymphatics.

Should the condition mentioned exist so that we get a relatively virulent germ introduced into the liver, then we get local results on the liver leading to parenchymatous degeneration, perhaps cirrhosis, and even to invasion of the systemic circulation. This invasion of the blood stream would, *a priori*, be more likely to take place the more severe the lesion from which the liver was suffering.

To determine whether there is any connection between hepatic disorders, as, for instance, cirrhosis of the liver, and the various forms of nephritis, I have consulted the *post-mortem* records of the General Hospital from 1883 to 1898, to which I have had access through the courtesy of Dr. Wyatt Johnston. In addition I have made use of the Royal Victoria records from 1895 to 1898. In the aggregate there were 1,547 autopsies.

Atrophic cirrhosis of the liver, or atrophic cirrhosis with fatty infiltration, occurred twenty-four times. Associated with these:

Acute parenchymatous nephritis was found	Twice
Chronic parenchymatous nephritis	Twice
Chronic diffuse nephritis	Once
Chronic interstitial nephritis	15 times
No special abnormality to gross appearance	4 times

This was a total percentage of 83.30, or chronic nephritis only in 75 per cent. Conversely, the proportion of chronic interstitial nephritis in all diseases other than cirrhosis of the liver, was 242 cases or 15.64 per cent.

In three cases of hypertrophic cirrhosis, acute parenchymatous nephritis was present in one; chronic interstitial in one, and no change in one. These figures speak for themselves.

Further, it has been mentioned by several observers that fibrosis of the pancreas often goes with cirrhosis of the liver; facts pointing to a common cause. In the five Royal Victoria Hospital cases, this condition was present in every case. Of course, the same infection that would attack the one would be likely to affect the other, the excreting ducts opening so close together. I have also frequently observed that there is a similar relationship between the kidneys and the pancreas in a large proportion of cases.

But while in the case of the liver and pancreas, the infection could be through the ducts or lymphatics, in the case of the kidneys, of course, it must be through the circulatory system. Moreover, it needs only to be mentioned that the toxins which are supposed to bring about nephritis act in a similar way upon the liver. This is seen in the case of chronic alcoholism, and it is far from uncommon to find in the infective diseases such as tuberculosis and typhoid, at one and the same time, an acute infiltration in the portal sheaths and in the interstitial substance of the kidney. I would, then, regard the disease as an attempt on the part of the kidneys to eliminate the bacteria which reach them.

This view is supported by the experimental work of Wyssokowitsch, Pernice, Scagliosi, Cavazzani and others.

Through the kindness of Professor Adami, I have studied the kidneys in the case of rabbits inoculated intravenously with pure growths of B. Coli, which he employed in his studies on cirrhosis of the liver. These animals were inoculated in the auricular vein, and then killed at regular intervals.

Rabbit A., killed fifteen minutes after intravenous inoculation with pure growth of typical B. Coli.

Microscopically, there were relatively few bacilli found, which were confined to the vessels of the cortical region and the neighborhood of the glomeruli. They appeared as fair-sized bacilli.

Rabbit B., killed thirty minutes after.

The bacteria were found in great numbers in the capsule and as large embolic masses in the arteriæ rectæ of the pyramidal portion. The glomerular tufts contained relatively few. Many could be seen in the perivascular lymph-spaces between the contorted tubules and between the collecting tubules in the medulla. These had the typical appearance. Bacteria could be seen in the endothelial cells of the capillaries, within the secreting cells of the cortical tubules, and in the lumina. When enclosed in the cells they were, as a rule, smaller, often appearing as slender bacilli with polar staining, and sometimes as a diplococcus form with a distinct halo. In the cells they stained badly, and seemed to be in a state of absorption. (Fig. II., Plate IV.)

Rabbit C., killed one hour after.

Bacilli were much fewer in number, being mainly confined to the interlobular and straight vessels, but also being seen as shadows in the parenchymatous cells of the convoluted tubules.

Rabbit D., killed four hours after.

The bacteria were seen largely in the interstitial substance between the convoluted tubules; many were within the excreting cells showing as faint diplococci or short bacilli with polar staining. Some were also seen beneath the basement membranes of the tubules, and within the lumina.

The glomerular capillaries contained very few. The diplococcus form was noted to be much smaller than the usual colon type. Cultures from the urine were sterile.

Rabbit E., killed twenty-four hours after.

Marked parenchymatous degeneration of the secreting cells; very few bacteria could be seen, mostly in shadows beneath the basement membrane of the contorted tubules.

These simple facts are in accordance with the observations of Chiari, Adami and others. After the intravenous inoculation of an animal, bacteria are found in all organs, principally the liver, kidneys, spleen and bone-marrow, but after a short time, chiefly in the liver. It is important to note that the endothelial cells of the capillaries and the secreting cells of the convoluted tubules in the kidney, have the power of ingesting bacteria, rendering them for a time, at least, inert. The same thing has been shown by Adami in the liver, when within fifteen minutes after inoculation, he observed bacteria within the endothelium, and in two hours within the liver cells themselves. I have seen the same ingestion of germs by the secreting cells of the contorted tubules of the kidney in the case of acute nephritis in lobar pneumonia, and in septicemia. The tendency of the bacillus to assume a diplococcus form is noteworthy.

Thus the liver and kidney parenchyma are shown to play an important part in the resistance of the organism against bacterial

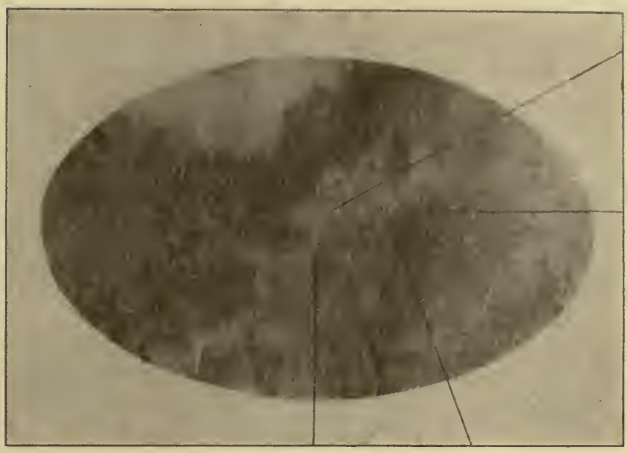


PLATE IV., FIG. I.

Acute parenchymatous nephritis in acute lobar pneumonia.

Diplococci of pneumonia in the lumen of a contorted tubule. Under the microscope, however, the diplococci could be seen as shadows within the secreting cells.

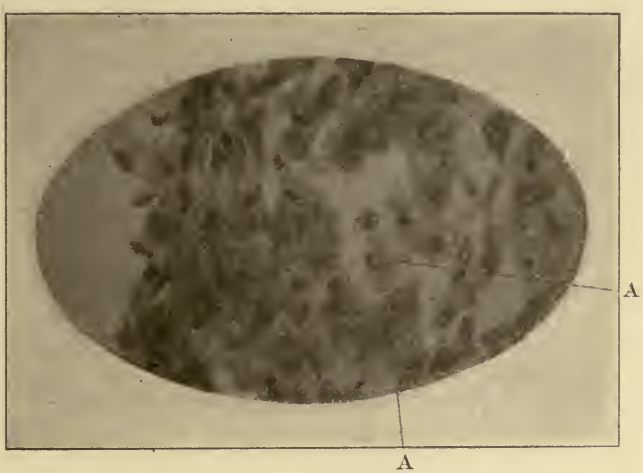


PLATE IV., FIG. II.

Kidney showing secreting tubules from an experimental rabbit half an hour after inoculation with pure growth of B. Coli.

The bacilli are seen as diplococcus-like forms within the secreting cell shown at A.

[NOTE.—For these photographs I am greatly indebted to Dr. David Patrick, who has admirably succeeded in a difficult task.—A.G.N.]

invasion. This resisting power on the part of the parenchyma, however, may be diminished in many ways, particularly by chemical and bacterial toxins, thus permitting the more rapid passage of germs through the organs.

In the light of the present study we get an entirely new conception of the process at work in the case of Bright's disease. All cases, acute and chronic, are brought into the category of "infections." The nature of the infecting germ varies; in the acute forms it is usually the specific germ causing the primary disease, although in some cases it is the colon bacillus. In the chronic cases, in the great majority, it is the colon which is the infective agent, but there is some evidence to favor the view that a few germs like the bacillus Pfeifferi and the diplococcus lanceolatus are capable of producing fibrosis. Two processes are at work, parenchymatous degeneration and productive inflammation. Parenchymatous degeneration alone is not to be regarded as a true nephritis, but is the result of chemical and bacterial toxins, bringing about injury to the secreting epithelium. Whether inflammatory infiltration occurs in addition or not depends on several factors:

1st, the number and size of the infecting germs.

2nd, the degree of virulence.

3rd, their specific qualities.

If the germs are few in number and of small size, they may pass through the glomerular capillaries, and merely produce degeneration and necrosis without further change. If they be sufficiently numerous to block the vessels or get into the capillary endothelium, then we get local inflammatory reaction with acute leucocytic infiltration.

A germ of low virulence brings about a low grade of inflammation, but if of high virulence, and in sufficient numbers, extreme degeneration is brought about, and interstitial abscess formation. The inherent quality of the germ is of importance. Thus some germs nearly always bring about suppurative inflammation, while others are more apt to bring about a reparative fibrous hyperplasia. This has been shown recently by Von Wunscheim, in a study of pyelonephritis. When the infection was due to streptococci, or staphylococci suppuration resulted, but when it was due to the B. Coli, he saw distinct evidences of connective tissue production. However, these differences probably have something to do with the virulence and abundance of the bacteria concerned.

In the chronic cases where fibrous hyperplasia is beginning to make its appearance, just as in the leucocytic infiltration of the acute cases, we see the fibrous change beginning about the afferent and interlobular vessels associated with vascular dilatation, followed later by compression and degeneration of the glomeruli, atrophy of the tubules, and the formation of casts. Interstitial proliferation then is the key-note of the process. This proliferation is the more readily brought about since there is present a germ which tends to produce fibrous hyperplasia; present, too, in very

small numbers in an infective process probably extending over years. And further, the progressive nature of the lesion is due to continuous action of a germ which has been shown to be present in all stages I consequently cannot believe as Holst does, that a toxin can go on acting so as to bring about a fibrous hyperplasia, long after the original infection has disappeared. That an infective agent, like the B. Coli, for instance, can be shown to be the *corpus delicti*, in all the stages of Bright's, explains the anatomical distribution of the lesions, the pathological process, and the etiological momenta, in a way that none of the usual theories have been able to do. We must, I think, assume that before the germs can act there must be a lowering of the vitality of the epithelium through toxins or otherwise.

My conclusions are :

1. That bacteria are constantly passing from the intestine into the liver, and thence into the general blood-stream, even in a normal animal.

2. The different forms of Bright's disease are to be regarded as various stages in the same general process, there being a unity pervading the whole pathological picture.

3. All forms of nephritis are due in the immense majority of cases to infective agents; the acute, to the usual specific germs of the primary disease, and the chronic, as a general rule, to the bacillus coli, though other germs may sometimes be concerned.

4. Acute interstitial inflammation and subsequent connective tissue hyperplasia are the key-note of the process; this is, however, preceded by parenchymatous degeneration.

5. The point of invasion by the B. Coli is the gastro-intestinal tract; for other germs it may be various.

6. The liver and mesenteric glands are the first barriers of defence; and the endothelial cells of the capillaries and secreting tubules of the kidney have the power of ingesting bacteria, this being an attempt at inhibition and elimination.

THE GREAT LAKES AS A HEALTH RESORT.*

BY E. HERBERT ADAMS, M.D., TORONTO.

THE object of this paper is to attract the attention of the medical profession of Canada to the natural advantages of climate possessed by the Great Lakes and their lakeside resorts as compared with the oceanic climate and that of the seaside resorts.

The subject will, of course, only be treated in a general tentative way, for it would take a volume to describe the immensity and majesty of the Great Lakes with their thousands of waterside wonders, their tens of thousands of islands, and their hundreds of

*Read before the Canadian Medical Association, Toronto, August 30th, 1899.

thousands of pleasant peninsulas and beautiful bays and beaches. When some years ago attempting to describe the attractions of Toronto as a fashionable watering-place and summer resort, it took a volume for me to do it, and if every physician practising at a Canadian lakeside resort—and almost every other physician, in Ontario at least, in this land of majestic water stretches, is practising at or near a lakeside resort—I say, if every other physician would go and do likewise about his nearest summer and health resort, the volume of summer and health resort literature so produced would wake the sleeping world as to the climatic and scenic advantages of this glorious summer land of ours; and the volume of visitors would fill the exchequer of the country, and incidentally that of the physician.

These great fresh-water inland seas are the natural playground and sanitarium for the people of this great continent of North America. It is to the lakes and rivers and islands of Ontario and Quebec that a large portion of the millions of our heat-stricken cousins across the border are to look for health, pleasure and pastime during the hottest summer months.

In the Southern States they are especially beginning to appreciate this fact, and the cream of the wealth and fashion of the South are already beginning to become regular visitors here, although we ourselves are doing little or nothing to study and extol our climatic and other advantages or make it easy for them to come. In such localities where we are doing a little in this way, the tourist traffic is increasing by leaps and bounds.

The South is interested, and it only needs information, proper hotel accommodation and a little judicious use of printer's ink to produce marvellous results in this direction.

Every physician who will write up his favorite resort will find American medical journals anxious to publish his paper. The notice of the title of this paper was scarcely in print before a Southern medical journalist wrote me requesting the paper for publication, and saying that the subject was specially interesting to them. Our own citizens are not awake to the advantages of our climatic and health resorts, and they must be educated by the physician and climatologist.

A patient, whose nervous and physical system was somewhat weakened from overwork and business worry, recently came to my office and wanted to know whether I would advise him to take an ocean trip for his health. He said he had just time to spare to cross the Atlantic and back before urgent business would again demand his attention. On questioning him as to whether he was a good sailor he said that he was occasionally seasick on an ocean voyage, but that he thought the sea air and change would do him good.

On asking him if he had ever taken a trip on any of our Great Lakes, his answer was "No," with the exception of day-trips by boat to Niagara, Grimsby or local resorts. My advice to him was to take

the Mackinaw trip, or some such trip on one of the Great Lakes, and my reasons for this advice were the following: It will cost you far less; you are not likely to be seasick; the scenery will be more varied; you will get more ozone from the breezes wafted from the shores of the immense pine forests of the north, over these great fresh-water seas than you will in any other way. Besides, you have made a comfortable living out of this country, and it is high time you knew something of the natural advantages, climatic and otherwise, of the land you live in. He took my advice, and he says he never was built up so much in so short a time, nor ever had a more pleasant time.

There is uninterrupted navigation for upwards of 2,000 miles on the Great Lakes and the St. Lawrence, and until we know our own country we can find abundant opportunity for a change of air and scene on our own waterways. It is to be hoped that, with the deepening of our canals and an enlargement of our lake passenger fleet, there will be a deepening of our interest in the health and pleasure trips of our Great Lakes, and an enlargement of our ideas as to the possibilities for the development of our health and pleasure resorts for American and European tourist travel. With the exception of the influence of the climate of very high altitudes, such as are to be found at Banff, Kamloops, and other points in our Canadian Rockies, and of the climate of the great salt water seas, which we have at its best in the Land of Evangeline on the east, and in the west on the sun-kissed shores of the Pacific—with these exceptions we have in the Great Lakes region during navigation season every variety of climate of a healthful and attractive type which is to be found in the world of to-day.

The great test of climate is, after all, as to whether it promotes nutrition, and is it free from all contaminating influences productive of ill-health and disease. Climate acts mainly through its general influence on the physiological functions. Change of air, change of scene, change of diet and of occupation and of daily routine are very important. Life on shipboard affords considerable advantages, providing you are able to be on deck most of the time, and there is sufficient variety in the surroundings and the scenery to prevent *ennui*. These conditions are found at their best in the ever-varying scenery of the Great Lakes and rivers of Canada

The temperature of this Great Lakes region is most equable and enjoyable. There are less daily variations than there are in California, Colorado, Florida and the seaside resorts of the Atlantic. The whole of this region, from the middle of May to the middle of September, is included between the same isotherms as the greater portion of France. The humidity is equal to that of many of the mountain sanitaria as far as dryness is concerned, while the mean daily humidity is less than that of Florida, Georgia, England, France and Italy. Ozone is abundant in the atmosphere and especially on our northern lakes, and no purer air can be found in the world.

Let us know where this Great Lakes region is before we go any farther, for if the latitude of our country were better known to ourselves and to Europeans, many false impressions regarding our climate would fade as quickly as the snows of winter in the midst of our Great Lakes, and these Great Lakes are never frozen over, even in the severest winter.

Were we, for purposes of illustration, to move Merry England, Bonnie Scotland and Ireland's Emerald Isle due west to the centre of this Canadian domain, Land's End (50.4 N.), the most southerly point of England, would be north of Nipigon, and John o' Groat's House (58.38 N.), in the north of Scotland, would be in about the same latitude as Port Nelson, half-way up the shores of Hudson Bay; Liverpool (53.25 N.) would be considerably north of Fort Albany (52.5 N.) at the mouth of the Albany River on James Bay; while the Lakes of Killarney (52.3 N.) and the blarney stone would be lost in the wilderness somewhere between Moose River and the Albany River whose waters flow into James Bay. Magna Charta was signed north of the Great Divide, and, in fact, the entire British Isles lie north of the Great Divide that separates the waters which flow into James Bay from those which flow south to the Great Lakes. While Windsor, Ontario (42.21 N.), is south of the Pyrenees Mountains (42.40 N.) in the north of Spain, Windsor, England (51.30 N.), is in the latitude of the south shore of James Bay. Lakes Ontario and Erie are in the latitude of the North Mediterranean Sea, Toronto (43.39 N.) being slightly south of Nice (43.42 N.), and considerably south of Venice, and the famous Pass of Roncesvalles (43.02 N.) is in nearly the same latitude as Niagara (43.12 N.), and Port Dalhousie (43.12 N.), Queenston Heights and Lundy's Lane. The Adriatic Sea is north of Lake Erie, and the battle of Balaclava was fought in exactly the same latitude as where the dusky Huron braves fought many a bloody fight with their savage Algonquin foes on the Saugeen River (44.30 N.). Paris, France, is north of the myriad islands of Lakes Temiscamingue and Temigamingue. Lake Como is north of the Muskoka Lakes, and Venice (45.25 N.) north of the Gravenhurst Sanitarium, while Rome, Italy (41.54 N.), is in the same latitude as Chicago (41.56 N.), and St. Petersburg is considerably north of Fort Churchill on Hudson Bay. Lake Windermere, England, is far north of Abittibi and many hundreds of miles north of Windermere, Muskoka.

The Great Lakes region is the land of clear skies and bright sunshine. A report made by Mr. R. F. Stupart, of the Meteorological Department here, shows that there are few, if any, places in England having a larger annual percentage than 36 per cent. of the bright sunshine throughout the year, and there are many as low as 25 per cent.; while in the region of the Great Lakes most of the places have an average of 40 per cent., while many reach 46; that of Toronto being 44, and during the summer months the average approaches 60 per cent. In England in but few places during the summer months does the normal excel 45 per cent. At

German stations the August average maximum per cent. is 50, and in a few cases reaches 52, though in the south somewhat higher averages are obtained—Vienna 54, Zurich 57, Trieste 66, Rome 75.

Around the shores of these lakes is one of the most delightful climates in the world as well as one of its best natural gardens. Here are grown in abundance fruit of the highest qualities, from the hardy apple to the delicate peach and tender fig. There are several million apple trees and a couple of million of grape vines, and over half a million each of plum, peach, pear and cherry trees.

A patient of mine suffering from pulmonary trouble, who has sought relief by mountain air and ocean trip, states that he finds the salt air of the ocean irritable to the bronchial mucous membrane, and considers that he obtains the greatest benefit by trips on our Great Lakes, and for several years past he has thus spent the most of his life during navigation season. He thinks the great pine forests of the north waft healing breezes over the lakes, which are soothing, instead of irritating, like salt breezes, to the delicate bronchial membrane. He has never had a cold on the Great Lakes.

There is no region on earth exceeding in healthfulness that of the Great Lakes. If you take, say, ten of the largest cities on the Great Lakes, and compare the death rate with that of, say, ten cities of similar size on the Atlantic coast, or ten on the Pacific coast, or ten in the interior, or with, say, ten European cities of the same size, you will find the death rate of the cities of the Great Lakes to be less than the death rates of the cities selected from the other districts chosen.

CRANIECTOMY FOR MICROCEPHALIC IDIOCY.*

BY W. J. WILSON, M.D., TORONTO.

SINCE Fuller, of Montreal, in 1878 trephined an idiot's skull with the object of improving his mental condition, and Lannelongue, of Paris, did linear craniectomy on microcephalic idiots with the same object, craniectomy has been undertaken a number of times and with varying success. The subject has been debated from several standpoints, some holding, as Lannelongue, that the premature ossification of the skull is the cause of the microcephalus and deficient brain development, and therefore the operation is rational. Others, as Laplace, justify it on the theory that the imperfectly formed brain improves in function and takes a greater amount of nourishment after the operation.

W. W. Kean says no good can possibly come from operation on an idiot with skull of average size, in extreme microcephalus or

*Read at the Canadian Medical Association meeting, Toronto, 1899.

in a patient over seven years of age, and concludes that in some few cases of moderate microcephalus craniectomy is justifiable, that slight improvement will follow in a small number of cases but in the majority there will be no change. He places the mortality at from 15 to 20 per cent.

Dana holds that craniectomy is justifiable in a selected class of cases. He believes that the clinical reports show improvement too often for the facts to be ignored. He thinks the operation is indicated in simple lack of development rather than where extensive lesions exist.

Jacobi gives forty-one operations on thirty-three cases with fourteen deaths, and of the nineteen recoveries there was slight improvement in eight and considerable improvement in two.

Dr. Carl Beck concludes that craniectomy is a justifiable operation and apt to be successful in microcephalus with idiocy. The success of the operation depends on the kind of microcephalus and the degree of idiocy. Acquired and late forms give a better prognosis than the congenital forms. The dangers of the operation are not very great. The operation ought to be quite extensive and the bone incision large enough to permit of dilatation. The patient must be given a thorough pedagogic training afterwards. Single cases ought to be followed up for years and reported on from time to time.

Dr. Graeme Hammond reports eleven cases without marked improvement in a single instance.

Treeves quotes Cunningham's demonstrations, which show that congenital microcephalus is due to some error of development, and that the microcephalic brain resembles the brain of the ape. He sums up the pathology as injury during the intra-uterine life or early infancy; infantile cerebral hemiplegia; mental defects without marked physical signs; sensory defects, such as deafmutism, hemianopsia, etc., with no marked motor or mental signs; porencephaly, meningo-encephalitis, hemorrhages, or cysts. These cases all have more or less atrophy with brain sclerosis. Treeves thinks the arrest of development may be temporary, and if during this period of arrest, ossification of sutures and fontanelles takes place, further development will be retarded. In this case linear craniectomy is indicated. He concludes the operation is not likely to be useful in congenital cases. It may be of benefit to remove blood clots or cysts from the surface of the brain and in epileptic cases.

There are so many conditions which, in microcephalus with idiocy, may be present either as a cause or simply in association—conditions which during life it may be impossible to diagnose—that the question whether we should operate in any given case becomes a matter for very serious consideration. There can be no doubt that premature ossification does take place, that fontanelles may be closed and the sutures ossified at birth, but whether this is a cause of the microcephaly, as was thought to be the case by Lannelongue,

or a result of arrest of brain development is still a debatable question. When gross cerebral lesions, such as extensive sclerosis, exist, the chances for improvement cannot be good.

Operations on the skull for microcephalic idiocy will not take a permanent place in our treatment until a large number of cases have been observed, and we are able to have judged better just what conditions may or may not be improved by operation. It is with this object in view that the following case is presented:

Henry R., aged five years. Family history good. No idiocy, deformities or insanity in the family of either parent. No history of tuberculosis or syphilis. One sister died from laryngeal diphtheria. Has two healthy brothers. There is a difference in the age between Henry and the next elder child of fourteen years. During these fourteen years there were no miscarriages. One since. Parents both healthy and strong; grandparents on both sides lived between seventy and eighty years. Other members of the family have average-size square heads. Mother had no frights and no thoughts of trouble in the child during gestation. At birth baby weighed seven pounds, was plump and fat, but his head was very small. His mother noticed there were no openings in his head.

Dr. Webster, who saw the child when six months old, says at that time there was no trace of fontanelles. He was a small feeder. Was nursed on breast for fifteen months but did not thrive well. At sixteen months he weighed fifteen pounds, was apparently healthy, but did not grow like other children. He was three years old before he could stand alone. His ankles were weak and turned in. Sight and hearing normal so far as known. In walking he bent forward almost to a right angle. He was restless and cried a great deal, was a bad sleeper, waking frequently during the night. When four years old began taking thyroid tablets. He began with one five-grain tablet per day, and by the end of nine months was taking four tablets or twenty grains of P. D. & Co.'s thyroid extract per day.

During this time his legs improved very much in strength and became straighter at the ankles, but body remained bent over in walking. Five months ago he was admitted under my care at the Western Hospital. At this time he could only say one word—mamma—and this he used for every person. He would not play with his toys, was very restless, and rubbed his head a great deal. He was then five years old, and it was noticed he was cutting his lower central incisor teeth. His first dentition began at the fifth month. His disposition was affectionate, but at times he became vicious towards other children. The cranial measurements, after hair was removed, were: Circumference at tip of ears, $14\frac{1}{4}$ inches; over vertex from meatus to meatus, $9\frac{1}{4}$ inches; diagonally over frontal bone from meatus to meatus, $8\frac{3}{4}$ inches; diagonally over occiput from meatus to meatus, 9 inches. Early in April an incision was made on one side of the sagittal suture and about one inch from it. At the first incision a piece of bone one by two inches was

removed. This was followed by very little shock, and in about three weeks a similar incision was made on the other side of the head. These two incisions were extended to about four inches by one inch on either side of the sagittal suture, and at periods of two or three weeks apart, making in all four operations.

The skull was first opened with a trephine, and the opening then extended by the aid of punch forceps. The periosteum was pushed to one side, but not removed, and the dura mater was not opened. There was some bulging of the dura at each operation. The skull was not thick, but so dense it took a very hard pressure of the forceps to cut it through. There was not much hemorrhage, but it was remarked there was an increased amount at each operation. The bone lifted easily from the dura except during the last operation which was on the posterior part of right incision, and here it was attached more firmly. No other conditions were noted. Shock was very slight after operation, and next morning he wanted to sit up in bed as usual. Some improvement was made from the first. He became easier to manage, and played more with his toys. He has learned a great many words and short sentences, and is learning more daily. His disposition is milder, he sleeps all night through, and has quit, for the most part, movements of his hands, which before operation were very marked. While he does not always stand erect or walk without some bend forward, his gait is vastly improved and he stands erect most of the time. He has had no special training since operation other than by his mother, so that training does not account for his improvement. Henry has always been quite musical and picks up tunes readily. He did this before operation.

When he came into hospital his circulation was bad, his hands cold, blue and damp. This was attributed to the use of the thyroid, and after it was discontinued his circulation improved.

The conditions in this case which decided for operation were (1) early ossification of sutures and fontanelles and early dentition; (2) absence in so far as could be discovered of gross brain lesion.

We congratulate heartily Dr. Jas. M. MacCallum on his election to a seat in Toronto University Senate, to fill the vacancy caused by the death of Dr. J. E. Graham.

We extend our cordial congratulations to Dr. P. H. Bryce, Secretary of the Provincial Board of Health of Ontario, on his election to the presidency of the American Public Health Association.

Drs. N. A. Powell and Luke Teskey returned ten days ago from their annual deer hunt. Their stories (!!!) are dead funny.



From the Painting by Heywood Hardy.

"DUTY."



"THE DOCTOR."



A CHARITY PATIENT.



A DYING DECLARATION.



From Rembrandt's Famous Painting.

"AN ANATOMICAL LECTURE."



AN ACCIDENT.

Dr. John C. Warren. Dr. W. T. G. Morton.



From Harper's Weekly.

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THE FIRST PUBLIC DEMONSTRATION OF SURGICAL ANESTHESIA AT THE MASSACHUSETTS GENERAL HOSPITAL, BOSTON, OCTOBER 16th, 1846.



ANDRE BROUILLET. SERUM-THERAPY FOR CROUP AT TROUSSEAU HOSPITAL, PARIS

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The Canadian Journal of Medicine and Surgery

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

VOL. VI. TORONTO, DECEMBER, 1899. NO. 6.

Editorials.

MOSQUITOES AND MALARIA.

BACTERIOLOGISTS are devoting a good deal of attention to the study of malaria, particularly in tropical countries, and a good deal of evidence has been collected in different parts of the world, to prove that certain definite families of mosquitoes perpetuate this disease in certain localities. Authorities are, however, not agreed as to the method by which the malaria parasites are introduced into successive generations of mosquitoes. The German Malaria Commission,

reporting September 14th, 1899, from Grosseto, Tuscany, say that each year's mosquitoes must get their supply of malarial parasites from the blood of human beings who had been previously infected. These infected persons form a bridge from one year's fever season to another, and, if they were isolated, the fever would die out in any given district. It is impossible to isolate them, but the Commission are of opinion, that suitable treatment with quinine during the eight or nine "safe" months, would render them incapable of infecting mosquitoes, and through the mosquitoes their neighbors. In this connection it has been shown that a localized outbreak of malaria, for example, in a country inn, has more than once dated from the arrival of a malarious person. According to this theory, the malarial parasite passes from the blood of the infected person to a mosquito, and is introduced into the bodies of other persons by the insect's bites. All kinds of mosquitoes are not considered equally capable of transferring malaria. At Grosseto, the German Commision found the anopheles and culex pipiens in malarious houses, and supposed that both these varieties were responsible for the malarial infection of the inmates. In this opinion they differ from Ross and Grassi, who credited malarial infection to the grey mosquito (anopheles) alone. The fact that mosquitoes are present at Grosseto during the "safe" portion of the year, as well as during June, July, August and September, when malarial fevers prevail, is explained by the assertion that the malarial parasite requires a certain degree of warmth for its development. The sudden outbreak of malaria occurs about twenty-one days after the temperature has reached 80.6° F. The parasite takes eight or ten days to develop in the mosquito, and the disease has an incubation period of ten days after inoculation, so that three weeks after the temperature has reached the right height, the disease becomes apparent. That heat has a direct effect on the development of the malarial parasite in the mosquito is shown by the fact that the sickle-shaped pigment bodies found in the poison glands of these insects only make their appearance there during hot weather.

Other suggestions have been offered to explain the presence of the malarial parasite in mosquitoes. Mosquitoes eat each other's excrements, and may become infected in this manner. The grubs might become infected through eating the dead bodies of the mother mosquitoes. Mosquitoes might also transmit the parasite to the eggs of the female mosquito as spores. Grassi has observed spores in mosquito eggs (anopheles), and again, it has been found

that in Italy fertilized female mosquitoes may live through the winter, perhaps in this way preventing the dying-out of the parasites.

The German Commission favor the view, that the malaria-infected human being, if properly cured by the exhibition of quinine, will be incapable of infecting the mosquito, and the malaria infection will die out in any given locality. According to the opposite theory, even if all infected persons residing in a certain locality were cured during the "safe" months, the malaria parasite which had been transmitted to the eggs of the female mosquito, would reappear in her descendants as intermediary hosts, and be introduced by them into man, and possibly other mammals, as principal hosts.

Whichever view may be the correct one, it is evident that, if ponds and marshes where mosquitoes are in the habit of depositing their eggs, are drained, mosquitoes will disappear and the malarial parasite with them. Hence the value of the well-attested fact, that localities in Europe and America, which once enjoyed "a bad pre-eminence" for malaria, after drying up of the soil had been secured, have become quite free from manifestations of this disease. In India, the problem of draining large swamps will be more difficult than in America. The grey mosquitoes (anopheles) can live at an altitude of 7,000 feet, which is precisely the limit to which malaria reaches in that country. The reason why fevers appear in the hill country of India in the autumn is that, owing to heavy rains, swamps form in which mosquitoes multiply unchecked, because they have not to struggle against their natural enemies, the fish and the frogs. In such cases, if neither public nor private authority will provide for the drainage of the swamps, it would be advisable to try the American plan of pouring a small quantity of kerosene over the surface of the swamp water, in order to prevent the development of the mosquitoes.

There is good evidence from many lands to show the protective value of the mosquito-net. Thus Dr. Ian Macdonald, physician to an English company in Spain, mentions that in a fishing colony of a hundred persons, all of whom were suffering from fever, the people said they were bitten furiously at night by a large mosquito. Their "patron" alone slept under curtains and had not had fever. Adult specimens of mosquitoes sent from their huts were A. claviger and A. bifurcatus. Thus the protective agency of the mosquito-net and the causative agency of the anopheles were

very distinctly brought out. While useful in shielding healthy people from malaria, the mosquito-net is indispensable in the cases of infected persons, since the mosquitoes may obtain in their blood fresh supplies of the infectious parasites. J. J. C.

THE TORONTO ORTHOPEDIC HOSPITAL.

The first annual meeting of the Toronto Orthopedic Hospital was held on the evening of Tuesday, November 7th, on which occasion a reception was given by the trustees and the ladies' committee. In response to the invitations issued, about 150 persons, including many of the medical profession, availed themselves of the opportunity to inspect the various departments of the hospital. The wards, orthopedic gymnasium and the mechanical departments, attracted many visitors, each presenting its own special feature of interest.

The visitors appeared to take much interest in a practical exhibition of orthopedic gymnastics given by a class of patients. The work here is not intended to show any fancy series of movements, but is designed to accomplish a special purpose in each case. It was a matter of great surprise not only to the laity, but to some members of the medical profession, to witness the amount of force that could be employed in order to rectify certain deformities.

Although not the usual hours for the work, the mechanics were asked to return to the shops in order that the actual work of the making of the appliances, special boots, etc., could be seen by the friends who were interested in this department. All the work required for making orthopedic appliances is done in the shops. The raw material in the way of steel and leather is brought in, and everything, even to the electroplating, is done here.

The annual report of the hospital which had been previously distributed to the visitors, was taken as read. Some remarks were made by four of the trustees, Rev. Dr. Potts, His Honor Judge MacDougall, Rev. Frank Ryan and Rev. John Gillespie. Briefly presented, the substance of their statements was to the effect that the hospital had been open about fifteen months, having at the commencement accommodation for twelve patients, while, at the present, twenty-six beds are provided, twenty-five of which are occupied at the present time. During this first fifteen months 172 patients were admitted to the wards for treatment. At first only one build-

ing was occupied, but recently a second one and part of a third have been leased by the trustees.

One feature of the work done is a matter of great interest to the medical profession, and is worthy of special commendation by this journal. The tendeney toward "hospital abuse," which has attracted the attention of medical men so largely in the great centres, and of which we have several times written in no uncertain manner, has been clearly recognized by both trustees and staff, and, regardless of its possible effect in limiting the number of patients applying for treatment, those interested have determined that while the poor shall have at their disposal every advantage of the hospital, a consistent effort will be made to limit its charitable work strictly to those who are unable to pay for hospital maintenance and medical care.

The history of the first year's work of the Toronto Orthopedic Hospital, as evinced at this first annual meeting, and as set forth in the annual report, certainly justifies us in joining the trustees in predicting for it a large field of usefulness and rapidly growing patronage.

W. A. Y.

THE ROLE OF RATS IN PLAGUE.

In his introductory lecture at the London School of Tropical Medicine, Dr. Manson devoted a good deal of time to show that plague is a rat-borne disease. He elaborated the fact that the rat is attacked by plague before that disease appears in epidemic form among men, and contended that the infection spread from rat to rat and from rat to man, so that, except in sporadic form, plague could not exist in any place where rats had been exterminated. With him the prevention of plague in a town would begin with the destruction of the local rats before they had been attacked with the disease. As he says: "When rats are tumbling about the floors drunk with plague, it is too late for general prophylaxis, and the remedy would then be Hafkine's injections." Dr. Manson explains that if an infected rat dies, it is eaten by other rats, or the fleas infesting it would transfer themselves to other rats and with them plague bacilli. This explanation offers a reasonable theory of the infectiousness of plague among rats, but leaves a hiatus as to the communication of the disease from rat to man. It may be, however, that Dr. Manson considerately allowed his hearers to fill in the etiological chain for themselves. Needless to say, in famine

times rats are eaten by men, and if plague-stricken, may transfer that disease to their hosts; but it is strange that the rat, which flees the companionship of man, should, when dying of plague, communicate his fleas to the superior vertebrate. And yet so it seems to be.

Ogata, a Japanese scientist, was the first to observe the role played by fleas in the propagation of plague. He discovered in the bodies of fleas the bacillus of plague, and concluded that the disease could be inoculated by the bites of these insects. A fact noted by Simond is very interesting. A great number of cases of plague were observed in persons who had been in contact with rats and mice; but, on the other hand, these contacts were harmless when the rats had been dead twenty-four hours. Now, it is well known that fleas rapidly leave the bodies of animals after death, which explains their harmlessness in the cases observed. Simond crushed fleas caught on rats or dogs sick with the plague, injected the resulting liquid into mice, which duly succumbed to plague after an interval of from three to thirteen days. Healthy rats bitten by suspected fleas died five days after being bitten, with all the characteristic symptoms of plague. Side by side with these positive proofs, Simond gives negative ones also; but, nevertheless, is inclined to admit this method of propagating the plague, which is doubted by Nuttal.

It must also be observed that the flea of the rat (typhopsylla musculi) is a distinct genus from the flea of man (pulex irritans), and that it has not yet been proved that it bites its human host. The ants, which devour rats dead from the plague and which do not catch it (Hafkine, 1897), may also be a source of danger, not so much by their bites as by infecting water and food upon which they are often found in great numbers. In view of these facts, a rat-catching campaign may be seriously considered by the sanitary authorities of European and American cities. In the opinion of the foreign physicians, who have been sent to study the plague at Oporto, the sanitary cordon in operation around that city is illusory, since it has not prevented the spread of the disease to a village about twelve miles out, and dangerous because the increase of poverty will intensify the spread of the plague. The large amount of money required to keep up a cordon of soldiers would be more usefully employed at Oporto in organizing depots for disinfection, in procuring the destruction of insanitary houses, and in making provision against overcrowding and poverty. It is now thought that the plague will continue at Oporto for

months, perhaps for years, without increasing in intensity. It will be almost impossible to prevent the contamination of other European cities with the plague, because in many of them there are thousands of people who suffer from direst poverty and live in the filthiest surroundings.

In the cleanest of cities, inhabited by people who practise personal and domestic cleanliness, who avoid overcrowding and shun infection, the spread of plague from man to man may be controlled; but if a plague-stricken rat should escape into the sewers of a European city he would certainly infect the other rats and the inhabitants as well. J. J. C.

TORONTO UNIVERSITY SENATE ELECTION.

Owing to the death some time ago of Dr. J. E. Graham, a vacancy was created in the Toronto University Senate, and necessity arose for electing another medical representative. This vacancy was filled recently by the election of Dr. James M. MacCallum, who defeated his opponent by a majority of ten. Those "in the inner ring" made every possible effort to have the election result the other way, but were snowed under. To quote the words of the closing sentence of an editorial that appeared in the October (1898) issue of the *Canadian Practitioner*, which dealt with the Toronto University Senate elections which had just then taken place, "We sincerely hope that in the near future, peace and harmony will exist in a faculty which should show no divisions in connection with the general policy which should prevail among the governors of our Provincial University." The question is, have the actions and sentiments of the writer of the editorial referred to coincided? W. A. Y.

REMOTE RESULTS OF A RESECTION OF THE URETHRA.

On the 5th of August, 1891, the writer of this article was present at the Necker Hospital, Paris, when Professor Guyon performed a radical operation on a small boy who was suffering from impermeable stricture of the urethra. The accident which caused the stricture had resulted in 1888 from the lad falling astride the back of a bench. From August, 1888, to January, 1891, he had been operated on four times, one external urethrotomy and three internal urethrotomies. Recontraction of the stricture ensued after each of these operations. The surgical procedure adopted by Pro-

fessor Guyon consisted in a complete resection of the strictured portion of the urethra, the severed ends of which were subsequently drawn together by sutures, followed by suturing of the overlying tissues in successive layers up to the surface. The writer was unable to follow the subsequent history of this interesting case, but is indebted for it to an article by Dr. Nogues, which was published in the *Annales des Maladies des Organes Genito-Urinaires*, 1899, No. 2, p. 167. It appears from the narrative that the perineal wound united by first intention, and that a No. 24 French sound could be passed through the urethra. In December, 1898, the patient was seen again by Professor Guyon. The stricture had reappeared; but, owing to the complete restoration of the urethra by the operation performed in 1891, the stricture proved to be very yielding, and after dilatation had been practised a few times, the urethra became quite permeable. J. J. C.

OUR ILLUSTRATED CHRISTMAS NUMBER.

Once more we wish our readers one and all a Merry Christmas. We fain would wear a sprig of holly on our own account, but it might not prove becoming to the complexion of a medical publication, intended exclusively for those who look at things through a microscope. So we just present our compliments at this gala season by introducing a few half-tones, reproductions of subjects of allied interest to all students of medicine. They include the well-known pictures, "The Doctor," "A Charity Patient," "The First Public Demonstration of Anæsthesia at the Massachusetts General Hospital, Boston, October 16th, 1846," "An Accident," "Duty," "An Anatomical Lecture," "André Brouillet—Serum-Therapy for Croup at Trousseau Hospital, Paris," and "A Dying Declaration." Probably this is the second time only that any attempt in the way of embellishment at Christmas time has been made by any medical journal in Canada, the first being in 1898 when this journal gave a number of half-tones illustrative of beauty spots in and around Toronto. This departure was so favorably received and so heartily commended that we again venture upon carrying out the idea which we have made our own. W. A. Y.

EDITORIAL NOTES.

An Acknowledgment.—We take the greatest of pleasure in acknowledging the kindness and courtesy extended to us by the

Arlington Chemical Co., of Yonkers, N.Y., in loaning us the half-tone plates which appear in and so embellish this number of the JOURNAL. We venture to say that never at any time has the management of any medical journal on this continent been able to give its readers such a wealth of valuable material as is contained in the present issue of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

An Early Symptom of Actinomycosis.—Inability to open the mouth, without apparent cause, was considered an infallible proof of actinomycosis by Poncet. Recently, Besnier presented to the Society of Dermatology, of Lyons, a patient, who felt a great difficulty in opening his mouth. An examination of his mouth revealed nothing abnormal; but in five or six months the skin broke down, and pus, containing the characteristic yellow grains, issued from the abscess.

Le Bulletin Medical de Quebec.—We have received and examined with interest a first copy of this new medical monthly, which is published in the French language at "the ancient capital." The original articles are good, and the selections are numerous and well chosen. It is published by the Medical Society of Quebec, with the collaboration of the Medical Faculty of Laval University. Under such able management it will easily maintain a high position among its readers, and will also serve to reunite the graduates of Laval University to their *Alma Mater*. We wish our confreres of *Le Bulletin Medical de Quebec* every success in their enterprise.

Substitution, the Bete Noir of Drug Manufacturers.—We can conceive of nothing so mean and so contemptible on the part of the retail druggist as the substitution by him, with the one object of making a larger profit, of one particular preparation for another, in the dispensing of physicians' prescriptions. Is there anything, we ask, which could be more fatal to any business than the adoption of such methods—methods unworthy of any firm? There is no question about the fact that in many cases the failure on the part of the physician to procure results in the treatment of many diseases is due to tactics of this kind. We are led to make these remarks on account of having noticed that just the other day Judge Kohlsaat, of the United States Circuit Court for the northern District of Illinois, perpetually enjoined a druggist in Chicago from ever again substituting any spurious or inferior preparation for "Fairchild's Essence of Pepsine," when the latter was expressly called for in physicians' prescriptions. We most

heartily congratulate the firm, who secured so deserved a success, on the result of their suit, and trust that it will have a wholesome effect in the future and act as a warning to others who might, in order to illegally increase their share of this world's goods, act similarly.

Exemplary Lay Advertising.—It is a well-known fact that the usual daily press advertising done by a very large percentage of medicine manufacturers is worse than outrageous, stamping the concern as being fake, pure and simple. One such advertisement, however, we came across the other day and cannot help alluding to it. It said: "The test of all proprietary remedies is this—what does your doctor say? We believe the physician is the best judge of what is what in regard to medicine, and our aim is to make —— —— Emulsion a useful remedy in the hands of physicians." We feel that if such methods were pursued as in this case, and some amount of judgment resorted to, there would be far less feeling on the part of physicians against concerns of the kind, and latterly more money come into the coffers of the manufacturers themselves.

Increase in Typhoid Fever in Ontario during August, 1899.—We notice by the monthly statistical report of the Provincial Board of Health, that typhoid fever in Ontario shows a high death rate during the month of August of this year, as compared with the same month of the previous year. In August, 1898, the mortality from typhoid fever was 34 or 0.2 per 1,000 per annum; in August, 1899, it was 55 or 0.3 per 1,000 per annum. This increased mortality indicates that frequent outbreaks of typhoid fever have been caused by an impure condition of the water supplies, and this is probably due to the drought during July and August, which caused a reduction in the level of the ground water and a more concentrated condition of impurity in the well water. In Toronto, during the month of August, 1898, the mortality from typhoid fever was 4, during August, 1899, it was 3. It would seem then that the drought, which produces low ground water and concentrated impurity in a country well, does not operate similarly in a water supply drawn from a large body of water. In fact, when the sewage and surface impurities of Toronto are not washed into Lake Ontario by frequent showers, the city water supply is purer than during a wet season, as in spring or autumn. Country people, to escape from typhoid fever, should improve their wells; city people, for a similar reason, should not discharge civic sewage into their water supplies.

The Physician's Library.

BOOK REVIEWS.

The International Text-Book of Surgery. By American and British authors. Edited by J. Collins Warren, M.D., LL.D., Professor of Surgery in Harvard Medical School; Surgeon to the Massachusetts General Hospital; and Pearce Gould, M.S., F.R.C.S., Surgeon to Middlesex Hospital; Lecturer on Practical Surgery and Teacher of Operatic Surgery, Middlesex Hospital Medical School; Member of the Court of Examiners of the Royal College of Surgeons, England. Vol. I., General and Operative Surgery, with 458 illustrations in the text and nine full-page plates in colors. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899. Price, $5.00 net per volume. Canadian Agents, G. A. Carveth & Co., Toronto, Ont.

Among the contributors to Vol. I. of this most complete system of surgery appear the names of such men as Charles McBurney, J. Bland Sutton, Maurice H. Richardson, Frank Hartley, Harold C. Ernst, C. H. Golding Bird, J. G. A. Burns, J. Chalmers Da Costa, John B. Hamilton, W. Watson Cheyne, and last, but not least, Irving H. Cameron, of Toronto, who contributes a very able section on Surgical Tuberculosis.

It was with a considerable feeling of modesty that the authors of this new book on surgery launched upon their work. They felt that there were many books on the subject already in the hands of the profession, but at the same time considered that a text-book of surgery was needed which would be entirely "untrammelled by many of the conditions of the past and at the same time present with due discrimination the results of modern progress." It will take the reader but a very short time to decide as to the great success which has attended their labors, the work as a whole being one which presents the most modern views on surgery in all its phases, and which ought to be in the hands of all who wish a volume suitable for work in every respect modern and up-to-date. The authors have recognized the fact that so wide is the field of surgery and so great its development that it is simply out of the question for one man to attempt to write anything like a text-book of surgery, so for that reason they sought and found the aid of a staff of men whose experience is wide and whose statements cannot be gainsaid, some of whose names we have already given. Since handing in his contribution to the work, one of the staff has already passed away and "crossed that bourne whence no traveller returns"—the late John B. Hamilton.

In treating of surgical tuberculosis, Mr. I. H. Cameron states that all periods of life are subject to tuberculosis, but that the surgical aspect shows itself largely in childhood, the strumous glands and bone and joint affections occurring most frequently in this period. The bacillus tuberculosis may pass from the mother to the fetus *in utero*, giving rise to a peculiar susceptibility by the tissues of the body to the tuberculous irritant, thus affecting a favorable nidus for the development of the germ. The writer states that the route by which the tubercle germ most frequently enters the system is the respiratory passage, the most likely vehicle of the contagion being dust, infected with dried sputum. The author lays stress upon the maximum amount of sunlight and pure air as being most important in the general treatment of the disease. Amongst the drugs which are most serviceable, are iron, manganese, quinine, strychnine, iodine, chlorine and phosphorus, with their potash, soda and lime salts, creasote and guaiacol, cod-liver oil and ichthyol, protonuclein and methylene blue; but Mr. Cameron adds "any or all of these in the absence of the trinity, free air, free sunshine and free nutrition, are broken reeds indeed."

The author deals with his subject under several headings, and takes up separately (1) tuberculosis of skin and mucous membrane, (2) tuberculous lymphadenitis, (3) tuberculosis of the serous membranes, (4) tuberculosis of tendons, tendon sheaths and muscles, (5) tuberculosis of muscles and fasciæ, (6) of the genito-urinary organs, (7) of the prostate, vesiculæ seminales, testis, epididymis and vas deferens, (8) of the bladder, (9) of the kidney.

The publishers are to be congratulated upon the array of material presented in Vol. I. of this text-book, and we bespeak a very large sale indeed for the work. W. A. Y.

The Nervous System and Its Constituent Neurones. By Lewellys F. Barker, M.B. (Tor.), Associate Professor of Anatomy in the Johns Hopkins University, and Assistant Resident Pathologist to the Johns Hopkins Hospital. 676 illustrations, two colored plates. New York: D. Appleton & Co.

"Barker's Nervous System," for which some have been looking for some time, has come to hand. Our personal acquaintance with and esteem for the author creates in us a desire to write a review worthy of the work, but we fear that anything that may be said will fall far short of the merits of the book. To say that it is probably the most comprehensive *résumé* and criticism of the work done on the nervous system ever published in the English language, is, we feel certain, not putting it a whit too strong.

Naturally, in a work of the kind, there is a great deal of purely technical information, but this is put in such a clear style as to be not only instructive but interesting to the average reader.

The author's description of the "neurone," and what is meant by the term, is concise, and readily grasped. In Chapter V. he is critical of Schäfer for having used the term "neuron," as limited to the axis cylinder process only, thus leading to a great deal of confusion.

Sections II. and III., covering Chapters VII. to XIV., take up the external and the internal morphology of the neurones, and is naturally technical and scientific. Section V., including Chapters XIX. to XXV., deals with "the neurone as the unit." The book is worth having for these chapters alone, and a perusal of them will prove to any reader not only instructive but entertaining.

In Section VI., covering Chapters XXVI. to LXVIII., "The Grouping and Chaining together of the Neurones" is considered in a most lucid manner. It is taken up in such a way as to be easily mastered by the general practitioner.

The book covers so much ground that it is impossible, in the space at our disposal, to go minutely into a review and criticism of detail, even if we were competent. We can, however, confidently recommend it as a useful addition to one's library, and any one desirous of keeping abreast of the recent literature on the nervous system will certainly feel it necessary to "read, mark, learn, and inwardly digest" its contents.

To those who have known Lew. Barker as a boy, as a fellow-student, as a fellow-graduate, and as a teacher, it is natural that we should turn to this—the result of many months of arduous labor—with peculiar feelings of pride and of admiration. For the author we have always entertained the highest esteem, and for this—his work—have nothing but praise. F. N. G. S.

A Practical Treatise on Materia Medica and Therapeutics. By Roberts Bartholow, M. A., M.D., LL.D., Professor emeritus of Materia Medica, General Therapeutics and Hygiene in the Jefferson Medical College of Philadelphia; formerly Professor of Materia Medica and Therapeutics and of the Practice of Medicine in the Medical College of Ohio; Fellow of the College of Physicians of Philadelphia; Member of the American Philosophical Society, etc., etc., etc. Tenth edition, revised and enlarged. New York: D. Appleton & Co. 1899. Canadian Agents: Geo. Morang Co., Ltd., Toronto.

It is just about three years since the last or ninth edition of this work was published, and in that short space of time such extensive changes have taken

place in the subject of Materia Medica and Therapeutics, not to speak of the large demand for Dr. Bartholow's work from the profession all over the world, that still another edition of the book became necessary. The tenth is a larger book than any preceding one, and consists of over 800 pages. The author has dealt at some length with some of the newer remedies, and has written a special article on the writing of prescriptions. The author states that, as the next decennial revision of the United States Pharmacopeia is so near at hand (1900) it will not be long before authoritative action as to all the newer remedies will be taken, thus terminating the state of uncertainty at present existing. The author divides this edition of his work into two parts, the first dealing with the modes in which medicines are introduced into the organism, and the second with the action and uses of remedial agents. Under the section on Evacuants and Cathartics, a most interesting chapter is that treating of Enemata. The author states that Enemata act either by reflex irritation or by absorption. The quantity, as well as the temperature, of the fluid injected must be taken into consideration when it is proposed to empty the bowels by merely reflex irritation. On the other hand, when it is the intention to procure the absorption of the medicated fluid, the quantity injected must be relatively small, and its temperature be that of the rectum. In order to secure absorption, it is necessary also to regard the laws of diffusion. As the secretions of the rectum are alkaline, it is obvious that acidulated solutions will diffuse into the rectal veins with the greatest facility. The utmost gentleness is requisite in administering rectal injections, especially if a large amount of fluid is to be introduced. If not, injury to the mucous membrane may result, or even rupture of the intestine if the coats are softened by disease. Sudden and forcible distention of the bowel may produce dangerous cardiac syncope in susceptible subjects. Experiments on the cadaver have demonstrated that, although the large intestine may be filled with water, no fluid can be made to pass the ileo-cecal valve. We notice that the author has not excluded proprietary medicines from his work. We consider such to be wise, as a treatise on Materia Medica would be wanting in thoroughness and completeness if it did not refer to the most recent remedies whether included in the Pharmacopeia or not. W. A. Y.

A Text-Book of the Practice of Medicine. By Jas. M. Anders, M.D., Ph.D., LL.D., Professor of the Practice of Medicine and of Clinical Medicine in the Medico-Chirurgical College, Philadelphia; Attending Physician to the Medico Chirurgical and Samaritan Hospitals, Philadelphia, etc., etc. Illustrated. Third edition, revised. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899. Price in cloth, $5.50; in sheep or half morocco, $6.50. Canadian Agents: G. A. Carveth & Co., Toronto.

It is but a year since the last edition of this work was issued. The second edition was very similar to the first and had very few additions indeed. This edition, however, is entirely re-written and revised. The section on Infectious Diseases has had particular attention paid to it, so great has been the advance in this department of medicine. There have been a large number of new subjects included in this edition of Dr. Anders' work, and among them we notice, in reading the book, periodic paralysis, ether-pneumonia, splenic anemia and meralgia paresthetica. There has also been added in the section on Nervous Diseases a chapter dealing with the subject of localization.

In dealing with ether-pneumonia, the author states that the aggregate number of cases from all sources gives a percentage of 0.07. Among the principal causes are: (1) Season, over 80 per cent. occurring during the winter and spring months. (2) Catching cold, or exposure during protracted operations. (3) Some morbid state of the respiratory mucosa at the time of anesthesia. (4) Dried secretions or incrustations of foreign matter that are loosened by the ether and drawn downward into the lungs. (5) Abdominal operations give the highest percentage of cases of ether-pneumonia, due doubtless to the protracted etherization. The clinical features compare aptly with those of secondary pneumonia, the diagnosis resting particularly on the typical physical signs. The author lays stress upon the great importance of a physical examination of the

thorax upon the sudden accession of fever, particularly if associated with thoracic pain, however slight, following an operation.

Meralgia Paresthetica, otherwise known as Bernhardt's Disturbance of Sensation, is a disease characterized by paresthesia and disturbance of sensation on the outer side of the thigh, in the region supplied by the external cutaneous femoral nerve. Of the disease there are two varieties: first, the paresthesial, where there may be burning, tingling or stabbing pains severe enough to disable the patient or only a feeling of cold or numbness; second, the sensory disturbances, varying from slight hyperesthesia to total anesthesia. The diagnosis is easy, prognosis doubtful and very little to be done in the way of treatment.

The book is one of considerable value, and in its third edition presents to the profession a complete work on medicine.

A Text-Book of Materia Medica, Therapeutics and Pharmacology. By G. F. Butler, Ph-G., M-D., Professor of Materia Medica in the College of Physicians Surgeons, Medical Department of the University of Illinois; Professor of General Medicine and Diseases of the Digestive System, Chicago Clinical School, etc., etc. Third edition. Thoroughly revised. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899.

The fact that a third edition of Dr. Butler's work has been called for since the first edition appeared in September, 1896, would naturally indicate that it has been found useful, particularly by the student of medicine. We should be inclined to think that as a ready work of reference it would also find a place on the desk of the busy practitioner. The arrangement of the drugs in groups, according to their therapeutic affinities, should make the study of any subdivision of the subject in hand less perplexing to the beginner, and will doubtless enable a practitioner to compare the composition of the various preparations with ease and despatch. The author, in addition to copious and timely selections from the best authorities, gives the personal observations of a skilled therapeutist in short, telling sentences, and by the frequent use of italics, enables the reader to seize on the salient points of the drug or preparation he wishes to study. A distinction is made between the toxic effects and the mere untoward results of drugs, which is rational in theory and will be useful in practical medicine. The article on Hematics, including animal extracts (organotherapy), will be found very readable. Under the heading of Alteratives, the Section on Arsenic contains some novel references to the uses of this drug, which will very much add to the interest of the reader. The remarks on the uses of colchicum are also very instructive. Owing to the really marvellous cures obtained through the use of anti-diphtheritic serum in diphtheria and of anti-streptococcic serum in septicemia, much interest naturally attaches to the perusal of the article on serum-therapy. The last chapter, devoted to prescriptions, contains detailed instructions on the art, not too widely diffused, of writing prescriptions in good Latin. Several useful hints to physicians on the business aspects of prescriptions are also given. In addition to a full general index, a clinical index is added, which, needless to say, is useful and time-saving. The typography and general appearance of the work reflects credit on the publisher. J. J. C.

Clinical Lectures on Mental Diseases. By T. S. Clouston. Fifth edition. London: J. & A. Churchill. 1898.

The changes and additions are so numerous in the present edition that it might almost be said to be an entirely new work on the subject, were it not that the author's inimitable charm in treating the matter is at once recognized by those who have followed his earlier work: a felicity of style which bids fair to make the present edition as popular a work for reference or general reading as the preceding editions have been on both sides of the Atlantic. Twenty elaborate plates, many colored, form an interesting feature, and add greatly to the value of the volume.

As the title of the book indicates, these are clinical studies. The author has very wisely refrained from entering deeply into pathological discussions upon a

subject which is yet in its infancy, and for which the technique of practical pathology, as it is at present practised, has been able to do very little. Judging by the example set by this eminent authority, the present tendency in psychiatry is towards simplification. No tendency can be hailed with greater eagerness, especially when observed in a clinical branch of medicine, where, until very recently, the practice of investigating every incidental symptom with the dignity of an independent mind-lesion had bred a state of chaos that could scarcely be more ridiculous on the one hand, or more hopeless on the other.

"I trust," the author remarks prefatorily—"I trust we teachers will be enabled now, more than ever, to present to our students, in addition to the details of our subject, the relationship of the disturbed mental functions of the brain to general medicine and surgery, and to prevent our department from sinking into a specialty in the bad sense. Mind and brain dominate all else in the organism, and their diseases, if properly studied, can never be narrowing."

E. H. S.

Encyclopedia Medica. Under the general editorship of CHALMERS WATSON, M.B., M.R.C.P.E. Vol. I., Abdomen to Bone. Edinburgh: William Green & Co. 1899. Pp. 579. $5.00.

This is the first volume of the most recent of the encyclopedias, of which the closing years of this century have been so prolific. The design of this work is very comprehensive, the aim being to do for medical science what the Encyclopedia Britannica has done for general literature. The articles are arranged alphabetically, and when completed the work is to consist of twelve volumes.

In this first volume the articles are well written though condensed. Many of them are by well-known contributors, such as Sir William Gowers on Epilepsy, Lander Brunten on Angina Pectoris, Byron Bramwell on Aphasia, Dudley Burton on Anesthetics, T. Colcott Fox on Acne, A. R. Simpson on Abortion, etc.

In the alphabetical arrangement the names of the diseases, not of the organs affected, are regarded, so that the diseases of an organ are not dealt with in a consecutive series of articles. This necessitates the purchase of the whole work to enable one to consult all the articles in any given department, as, *e.g.*, disease of the lungs.

In encyclopedic works the articles are often hastily written and are not the best work of the contributors, who are apt to feel that their individuality is lost in the multiplicity of authorship. This, no doubt, accounts for much that is disappointing in such works. In this volume, however, the articles generally have escaped that injurious influence. It is much to be regretted that English and American publishers have not adopted the German plan by which a single volume, or even a part of a volume can be obtained without purchasing the whole work. Such a plan encourages special work in the profession by furnishing the literature of any subject at a minimum of cost. In such a plan also the contributors would feel that the success of their individual parts would depend on their intrinsic merit rather than on the reputation of the work as a whole. It remains in a great measure with the profession itself to effect such a change in the methods of publication. Failure to obtain subscribers to these many-volumed works would soon compel the publishers to sell individual volumes, or even parts of them.

This first volume of the "Encyclopedia Medica" is well printed and presents an appearance creditable to the publisher.

A. M'P.

A Text-Book of Diseases of the Nose and Throat. By D. BRADEN KYLE, M.D., Clinical Professor of Laryngology and Rhinology, Jefferson Medical College. With 175 illustrations, 25 of them in colors. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899. Toronto: Carveth & Co.

The publisher has every reason to be proud of this excellent addition to the long series of good books which have issued from his press. Dr. Kyle, like other modest authors, introduces his work by excusing some features of it. His readers, however, will be apt to consider these very features strong points, for

every chapter is practically complete in itself. While evidently thoroughly conversant with all the literature of his subject, the author does not hesitate to advance his own opinions, side by side with those generally accepted.

The increased attention being paid in rhinological practice to diseases of the accessory sinuses is mirrored in the very complete and satisfactory chapter on this subject. That peculiar disease, membranous rhinitis, he divides into three classes, croupous, fibrinoplastic and diphtheritic. The croupous form he ascribes to the streptococcus pyogenes, associated sometimes with the attenuated form of diphtheria bacillus, yet he does not think it necessary to isolate the patient. In treatment of atrophic rhinitis he makes no mention of the aceto-tartrate of alum, a drug which has proved most satisfactory in our hands.

Taken altogether this is one of the most satisfactory books which has yet appeared on diseases of the nose and throat.

Introduction to the Outlines of the Principles of Differential Diagnosis, with Clinical Memoranda. By Fred. J. Smith, M.A., M.D. (Oxon.) F.R.C.P. (Lond.), Physician (with care of out-patients) and Senior Pathologist to the London Hospital. London: Macmillan & Co. (Lmited). New York: The Macmillan Co. 1899. Price, 7s. 6d.

The writer claims for his book nothing particularly new, but a rearrangement "of the old, old phenomena of disease in such a manner as to show more clearly their fundamental meaning and relationship." He has drawn his inferences and deductions by utilizing the data of physiology and the facts of pathological anatomy. The work is not large, but at the same time is replete with facts which are of practical value to the practitioner of medicine. It is next to impossible for a physician to carry with him the necessary fund of information to enable him to always make correct diagnosis. A work such as Dr. Smith's "Differential Diagnosis" is just the thing for this purpose, and we feel sure that it will meet with a large sale, not only in the Mother Country, but in the Colonies as well.

The Physician's Visiting List (Lindsay & Blakiston's) for 1900. Forty-ninth year of its publication. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street.

Once more this popular visiting list has made its appearance. Its method of keeping accounts with the least possible trouble and greatest amount of accuracy is as apparent as ever. It is very handy in size, and is published in three sizes—the regular, perpetual and monthly editions. (See advt. page cxxvii. this issue.)

Rough Notes on Remedies. By Wm. Murray, M.D., F.R.C.P. (Lond.), Newcastle-on-Tyne. Third edition. London: H. K. Lewis, 136 Gower Street, W.C. 1899.

In this little work of 142 pages the author takes up some of our standard remedies, such as arsenic, mercury, belladonna and turpentine, and shows that our knowledge of these drugs is by no means complete. The author, in the case of arsenic and belladonna, pushes his dosage to a greater extent than is generally considered advisable, but his results seem to justify his practice.

A chapter of considerable interest is devoted to "Our Mistakes," and another to "Liqueur Brandy."

We think the author's idea of working up the therapeutics of our old standard remedies an excellent one, and one calculated to do much good.

We hope another edition may soon appear, with a much extended list of drugs. The type is clear, and printed on good heavy paper. W. J. W.

Insanity and Allied Neuroses, Practical and Clinical. By Geo. H. Savage. Cassel & Co. 1898.

In the present revised edition of this well-known text-book many changes have been made by which it has been brought up to current opinion upon the subject. Though many other short works upon insanity have appeared, both in America and England, during the last few years—works, moreover, which

exhibit the highest degree of excellence—there have been none which contain more in so small a space, present the subject in clearer form, or, in a word, possess, to a greater degree, all the essentials of a very concise, yet authoritative, text-book on psychiatry. E. H. S.

On Failure of Brain Power—Its Nature and Treatment. By JULIUS ALTHAUS, M.D. London: Longmans, Green & Co. 1898.

In this interesting and useful volume the author has gathered together a large mass of facts which belong neither to insanity proper, nor to general medicine, yet which have a bearing upon certain nervous conditions with which the general practitioner is constantly meeting. The mode of treatment is sound, the matter is in touch with the most recent developments of scientific research, and the therapeutic suggestions are worthy of the closest attention.

E. H. S.

No. 5 John Street. By RICHARD WHITEING. Toronto: Methodist Book and Publishing House.

In this book the characters live, speak, and tell their own story—the story of life's contrast between the rich and the poor; pathetic, often grimly humorous, sometimes tragic, yet truthful. The book fascinates, and the interest never flags during the reading of it. The man who wrote the book is an artist, he paints his picture true to life, and lets his models pose themselves. He does not strain at a gnat, and give his readers a camel to swallow in the shape of a moral treatise; his characters tell the tale, and he leaves his readers to understand.

LITERARY NOTE.

"Imperative Surgery for the General Practitioner, the Specialist and the Recent Graduate." By Howard Lilienthal, M.D., Attending Surgeon to Mount Sinai Hospital, New York, is the title of a work on the press for immediate publication by The Maemillan Company. In a grave emergency, and in the absence of expert assistance, any physician may find himself obliged to perform the work of the surgeon. To shirk responsibility may cost a life or make a cripple. Dr. Lilienthal's book, which deals with just these conditions, will be a particularly valuable possession for the general practitioner and the recent graduate. The reader is not embarrassed by descriptions of a multiplicity of operations for the relief of a single diseased condition, but is presented in each instance with one good method, as simple in character as is consistent with good surgery. Original illustrations from drawings and photographs of the actual field of operation render the explanation still clearer. The book deals with fundamental principles.

PAMPHLETS, REPRINTS, ETC., RECEIVED.

"The Medical Treatment of Movable Kidney." By Alfred Stengel, M.D., Philadelphia.

"The Blood in Diseases of the Cardio-Vascular System." By Alfred Stengel, M.D., Philadelphia.

"Gastroptosis—Report of a Case in which a New Operation was Undertaken, and the Patient Gradually Improved." By Alfred Stengel, M.D., Philadelphia.

"A Brief Onset in Typhoid Fever." By William Pepper, M.D., LL.D., and Alfred Stengel, M.D., Philadelphia.

Announcement of the College of Physicians and Surgeons of Ontario, and Reports of Proceedings of Ontario Medical Council, July, 1899. For the academic year, 1899-1900.

"The Treatment of Hemorrhoids and Rectal Prolapse by Means of Interstitial Injections." By Dudley Wright, F.R.C.S. London: Henry J. Glaisher, 57 Wigmore Street, Cavendish Square West. 1899.

Selected Articles.

PROTONUCLEIN IN GENERAL PRACTICE.*

BY G. W. SHERMAN, M.D., DETROIT, MICH.

My first practical experience with protonuclein was on myself. About two and a half years ago I was taken with a severe attack of acute catarrhal inflammation of the nasal mucous membrane, which rapidly extended down the trachea into the bronchi. It began on a Friday morning with an almost incessant sneezing accompanied by blocking of the nose, fulness in the head and headache, followed later in the day by a thin, copious discharge from the nose, and an irritating cough. By five o'clock p.m. the same day my headache was severe, my limbs all ached, and on taking my temperature it registered 101°. I had had similar attacks before, none apparently quite so severe, which always ran a course of from one to three weeks. I had tried quinine and other remedies without any appreciable benefit, and was a willing subject to try something new. I had a few samples of protonuclein and began to take them *ad libitum*, starting about five o'clock in the evening. By Saturday morning I felt some better and continued taking the preparation through all the day, still *ad libitum*, and by evening, twenty-four hours after its use, felt considerably improved. I continued taking more during Sunday, when my nose cleared up, and the headache, fever, cough, and soreness in my limbs disappeared. By Monday evening, after three days' treatment, I was practically well and attended a meeting of the Detroit Medical and Library Association. Since then I have always prescribed protonuclein in these acute catarrhal affections, with the same happy result. Experience has taught me that the proper dose for such cases, in the adult, is from six to twelve grains repeated every two to three hours. The treatment should be continued with smaller doses for a few days after the disease has disappeared to prevent a relapse.

I have found protonuclein especially useful in the treatment of broncho-pneumonia in infants and children. In these cases I usually give from two to four grains, according to age, repeated every two to three hours, and find that a recovery takes place in from three to five days I have had remarkable success in treating pneumonia with this preparation and will briefly report three cases.

Case 1.—My mother, aged seventy-two years, on April 8th, 1897, suffered a severe chill about nine o'clock in the evening. Two hours later when I first saw her she complained of pain in the right

* Read before the Detroit Medical and Library Association.

side; was coughing up bloody mucus, and was very uneasy. Her heart had been irregular for some years, but now the pulse was 130 and her temperature 103°. Physical examination revealed pneumonia of the right lung. I prescribed two grains of phenacetin and six grains of protonuclein, to be repeated every two hours. By ten o'clock the next day her temperature was 99⅗° and her pulse 108; the pain in her side was less and she felt much better. The phenacetin was discontinued and the protonuclein continued. By the third day her temperature was normal, and she felt so well that in spite of my protests, she was determined to sit up. She coughed up rust-colored sputum for six or seven days, but otherwise felt quite well. She has had no trouble with her lungs since.

Case 2.—J. R., a female, aged twenty years, had a chill at six o'clock in the morning, followed by fever and pain in the left side. I saw patient first at eight o'clock p.m. next day, when her temperature was 102°, pulse 115, respiration short, with pain in the left side, and dulness on percussion over lower half of left lung. I prescribed six grains of protonuclein and two grains of phenacetin, and ordered the dose to be repeated every two hours. Next day at four o'clock p.m. her temperature was 101°, pulse 108, and she felt and looked better, but coughed up bloody mucus. The third day at four o'clock p.m. her temperature was 104°, pulse 120, and she felt worse, having more pain in her side, coughing up much bloody mucus, and feeling restless. On inquiry I found that she had only received her medicine every four hours instead of every two hours as I had directed. I now prescribed nine grains of protonuclein and two grains of phenacetin, and ordered that the dose be repeated every two hours. The fourth day at three o'clock p.m. her temperature was 99⅘°, pulse 96, and she felt better, coughed less and had but little pain. The protonuclein and phenacetin were continued. The fifth day at four o'clock p.m. her temperature was 98°, pulse 83, but little bloody mucus being expectorated, lungs clearing up, and she felt like leaving the bed. Protonuclein was continued, and phenacetin discontinued. The sixth day her temperature and pulse were normal, appetite good, and patient convalescent. I prescribed nine grains of protonuclein, the dose to be repeated four times a day for a few days, after which no further medication was required.

Case 3.—C. G., a male, aged sixty-three years, had not felt well for several days, and was taken with a fever the day before I saw him. Patient complained of a pain in his right side, and difficulty in breathing. His temperature was 102⅗°, pulse 110, and the lower portion of his left lung was inflamed. I prescribed six grains of protonuclein and ordered that the dose be repeated every two hours. The next day there was hepatization of the lower half of the right lung, with a temperature of 102°, and a pulse of 108. The protonuclein was now increased to nine grains, repeated every two hours. The third day the temperature was 101°, and the pulse 100. He felt better and on examination the lung was found to be

clearing up. The protonuclein was continued. On the fourth day the temperature was 98°, the pulse 84; patient had enjoyed a night's rest, appetite returning, and lung much improved. The fifth day I found my patient dressed and sitting in a chair. He said he felt well, but I persuaded him to go back to bed, fearing something might happen. I continued the protonuclein four times a day for a few days, when he made a complete recovery.—*The Physician and Surgeon.*

OTITIS.

BY DR. HUGH BLAKE WILLIAMS, OF CHICAGO, ILL.

THE more I see of chronic suppurative inflammation of the ear, the more convinced do I become that the element of chronicity is due to lack of thoroughness in treatment. The method of procedure mapped out below will not succeed in cases where necrosis has occurred, but in all others it will reduce the duration of treatment from months and weeks to days.

The patient is placed upon the side with the affected ear up. The concha is filled with Marchand's Hydrozone, which is allowed to remain until it becomes heated by contact with the skin, when, by tilting the auricle, the fluid is poured gently into the external canal. The froth resulting from the effervescence is removed with absorbent cotton from time to time and more Hydrozone added. This is kept up until *all* bubbling ceases. The patient will hear the noise even after the effervescence ceases to be visible to the eye.

Closing the external canal by gentle pressure upon the tragus forces the fluid well into the middle ear, and in some instances will carry it through the Eustachian tube into the throat. When effervescence has ceased the canal should be dried with absorbent cotton twisted on a probe and a small amount of pulverized boracic acid insufflated.

The time necessary for the thorough cleansing of a suppurating ear will vary from a few minutes to above an hour, but if done with the proper care it does not have to be repeated in many cases. However, the patient should be seen daily and the Hydrozone used until the desired result is obtained.

Care is necessary in opening the bottle for the first time, as bits of glass may fly. Wrap a cloth about the cork and twist it out by pulling on each side successively.

In children and some adults the Hydrozone causes pain, which can be obviated by previously instilling a few drops of a warm solution of cocaine hydrochloride. In this note it has been the intention to treat suppuration of the ear rather as a symptom and from the standpoint of the general practitioner.—*Abstract from The Alkaloidal Clinic of Chicago for January, 1899.*



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